AMERICAN
GAS JOURNAL

MARCH 1943

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Dessert for the Axis

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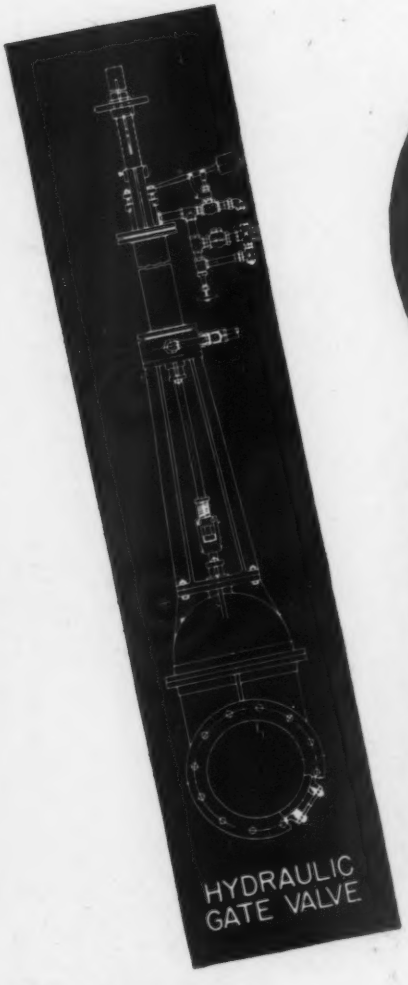

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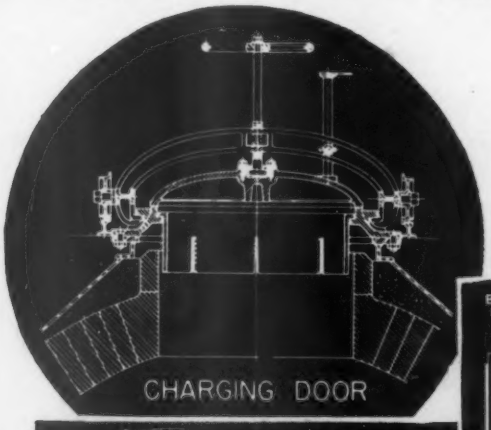
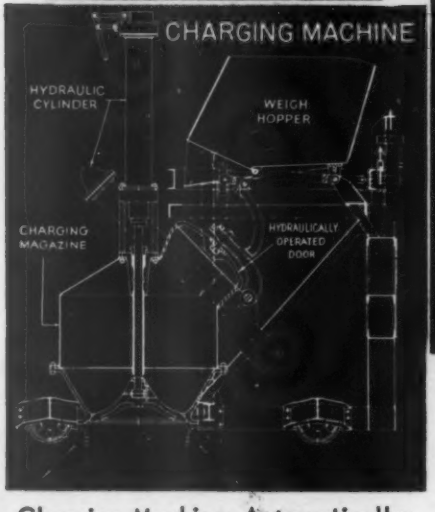


Charging Door. Rolling type allowing unhampered work around charging hole.



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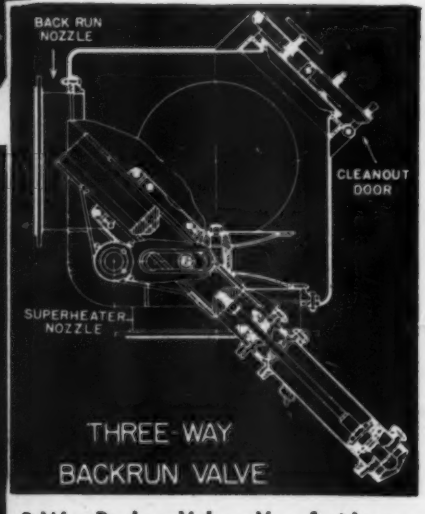

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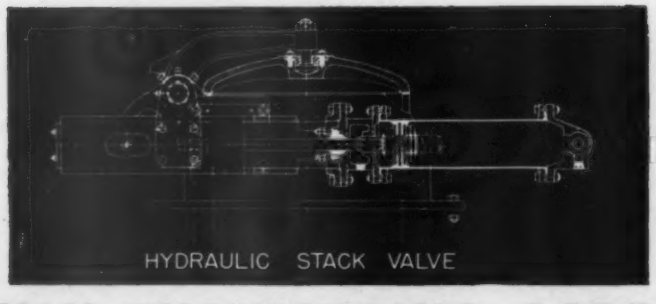

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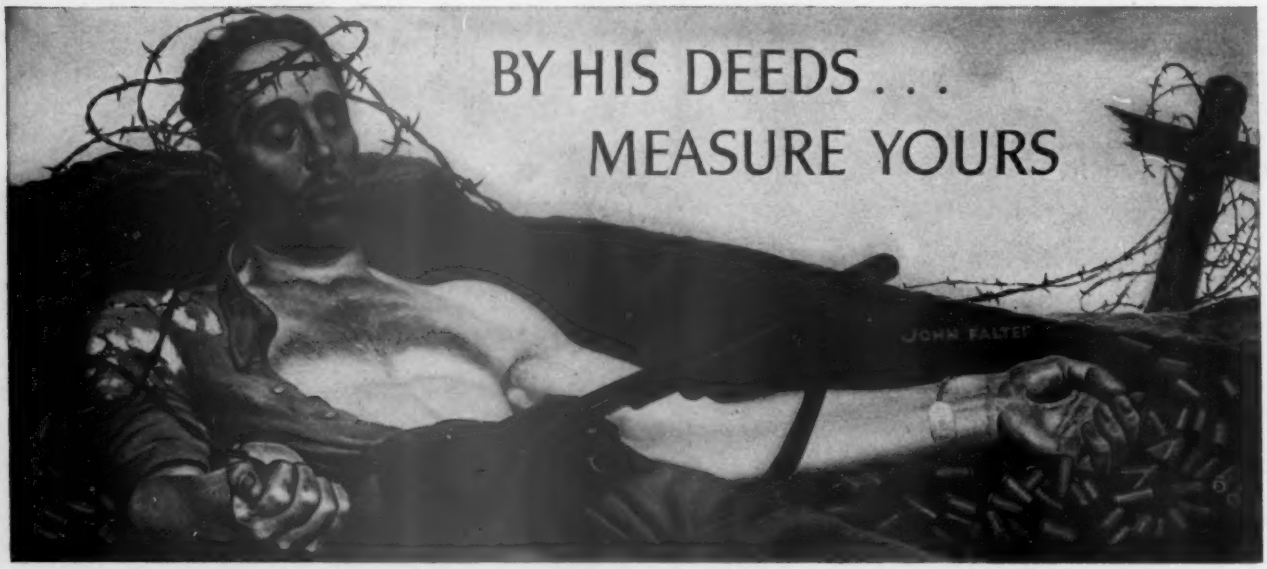
IT is not pleasant to have your peaceful life upset by wartime needs and restrictions and activities.... It is not pleasant to die, either.... Between you who live at home and the men who die at the front there is a direct connection.... By your actions, definitely, a certain number of these men will die or they will come through alive. If you do everything you can to hasten victory and do every bit of it as fast as you can ... then, sure as fate you will save the lives of some men who will otherwise die because you let the war last too long.... Think it over. Till the war is won you cannot, in fairness to them, complain or waste or shirk. Instead, you will apply every last ounce of your effort to getting this thing done.... In the name of God and your fellow man, that is your job.



The civilian war organization needs your help. The Government has formed Citizens Service Corps as part of local Defense Councils. If such a group is at work in your community, cooperate with it to the limit of your ability. If none exists, help to organize one. A free booklet telling you what to do and how to do it will be sent to you at no charge if you will write to this magazine. This is your war. Help win it. Choose what you will do—now!

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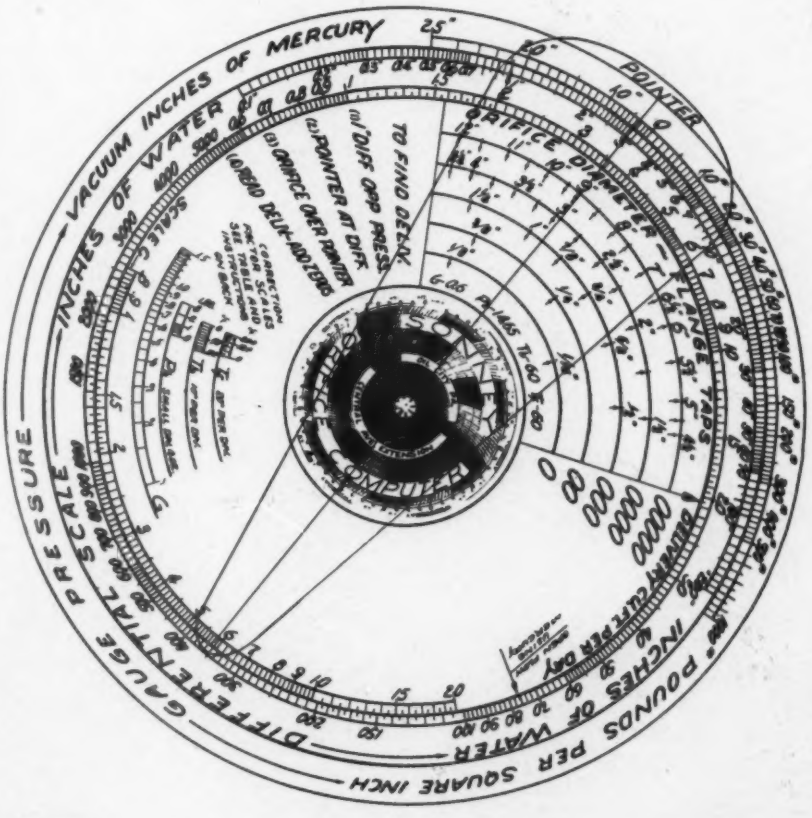

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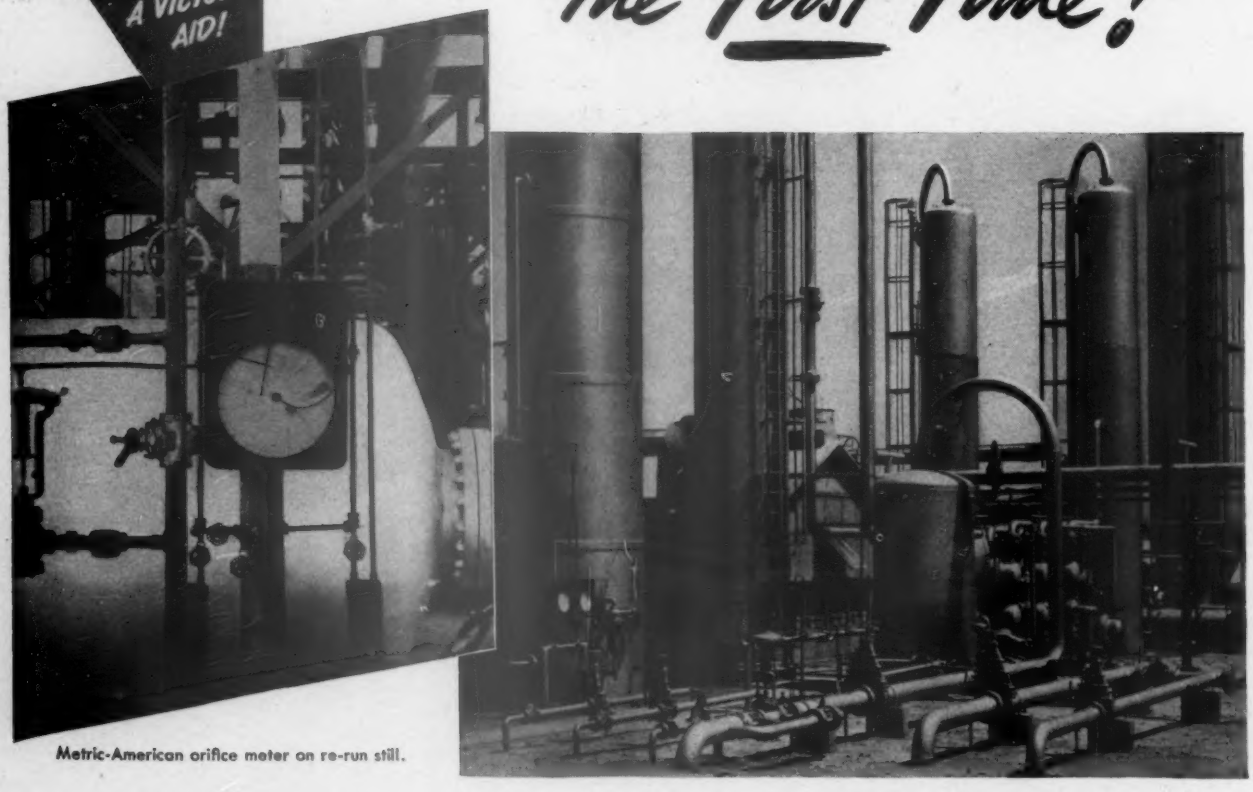

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1934

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AMERICAN
GAS JOURNAL

VOLUME 158
NO. 3

Ersatz In The Gas Business

By
George Wehrle
Superintendent Gas Distribution
Public Service Company of Colorado

George Wehrle

THE GERMANS popularized the word "ersatz", meaning "substitute" or "in place of", while building up the war machine that startled and at the same time, awakened a complacent world. Ersatz was palmed off upon the populace of that country while the real thing went into the war machine or for the use of the warriors and the leaders. And thus indirectly the use of substitute materials and methods was forced upon us by those people while we build up armament quickly with which they will be conquered.

We have gone to the use of substitutions in a limited way but to the extent necessary to free strategic materials for the war effort. Substitution is not always done without difficulty but it is our contribution to a worthy cause and will but exercise the resourcefulness of the gas industry and the ingenuity of its operators. We are asked to "grow two blades of grass, two grains of corn upon a plot of ground where only one grew before." We are faced with peak loads caused by war and must handle them with the same or only slightly improved facilities and with reduced manpower. Figuratively speaking, we have given of our pipes, our meters and our equipment to be made into armament for the downfall of our enemies that we may again soon engage in our free enterprise of providing a free people with the conveniences and necessities of life to which they are accustomed.

We who are distributing natural gas have not felt the pinch and deprivations as have those companies in the manufactured gas industry who must depend upon heavily loaded common carrier transportation systems for delivery of gas-making supplies. Our delivery system hauls only the one commodity for which it has been designed and we are not in competition with other industries for the use of its facilities. Our chief requirement is pipe and how to get it and get it installed is our principal problem. Everyone in the gas business is familiar with Limiting Order P-46 and the various directives relating thereto. Those of the War Production Board who handle priority matters have been considerate of our needs and reasonable in the disposition of our applications. We have not always gotten what we asked for but realize that distribution of strategic supplies must be for the greatest good of the whole nation.

Our experiences in Denver may be of interest to others. Due to rapid development of war industry and consequent population increase, a need for several major improvements in distribution system capacity became apparent last year. The matter was placed before the proper persons in the War Production Board by personal contact and, after a thorough engineering consideration, authority was given to proceed with the work under a certain priority rating, which was afterward found to be not quite good enough to secure new pipe from the manufacturers promptly. The job then was to see if suitable pipe of any kind was available throughout the country. Numerous telegrams were dispatched to various dealers in salvaged material and other transmission and distributing companies were contacted. Fortunately, one company had a stock of 10-inch and 20-inch new pipe that had been stored in the open and had accumulated some rust, therefore losing some of its desirability. We were glad to get it and a portion was routed through a wrapping plant on its way to Denver. We needed some 12-inch pipe and the only offer we had was from a salvage dealer on the East Coast who offered us several thousand feet in odd lengths varying from 3 to 6 feet. It was the tops cut off of pilings. Much as we needed it, we did not accept this offer and finally had to compromise on 10-inch pipe as a substitute. For our requirements of 4-

and 6-inch pipe, we found a dealer with a stock of used well casing. Suffice to say, we had our improvements installed before the peak load of this winter came upon us. Our distribution system is functioning perfectly and handled a new peak load of 57,199 MCF on January 18, 1943. So much for ersatz pipe for mains.

Welding rod is just another essential commodity that is hard to obtain. We found several bundles of soft steel wire in our salvage room and, strange as it may seem, this proved to be a suitable ersatz welding rod and it did a pretty good job of holding pipes together. Sure it was not what our Operating Manual directed us to use, but it worked—so what. We have saved a lot of 1¼- and 2-inch pipe recovered in maintenance work by scrapping only the affected portion and reconditioning the good sections. These are welded together into suitable lengths for reuse. A good deal of spot patching instead of pipe replacement is employed in our maintenance programs.

We have been using a great deal of salvaged solder on our tin meters and are giving consideration to going farther into this field, consistent with authority granted by Supplementary Order M-43-b of the War Production Board. We already have established an eight-year routining period for tin meters, which may be extended another year for 5-light meters. Extending the allowable limits of accuracy of meters to plus or minus 4%, as provided in Order M-43-b, will probably decrease by 50% the number of meters requiring opening for adjustment. We have been a little cautious in using ersatz solder on account of the hazard of leaking gas involved.

In the Transportation Division of our Company, we find plenty of need for improvising. New trucks, of course, are obtainable, but not on the basis of economy to which we are accustomed to replace them. We started out the year 1942 with our fleet in first-class condition and there have been no replacements since and none are contemplated in 1943. We had only lightly explored the field of possibility in the use of recapped and retreaded tires and it was not as yet a part of our established practice, but now we are using them extensively if and when we can show cause to the Rationing Board. We have had no difficulty in securing needed recaps or new tires or in securing suitable rations of gasoline to meet the need for essential service. We have promoted "share--the-ride" groups among our employees and have by practicing economy and the establishment of a 24-hour customer servicing period reduced the miles traveled by our fleet about 50%.

The matter of securing replacement parts for trucks and automobiles is quite a problem in itself. All parts are difficult to obtain and many are impossible to get. We have relieved this situation somewhat through the recent purchase of a metalizing spray gun which is used to build up old parts that are then machined for reuse. Nothing goes to the scrap pile that can be made to give some more miles of service and, while this may not be economical operation, it keeps our trucks on the road, helps us provide an essential service, and aids in winning the war.

We have touched upon the major things that have been and are now confronting us on account of the war. There are many small details too numerous to mention that are met and handled from time to time. The personnel problem has bothered us too, but we have not as yet been forced to employ women to replace men in any of our operating duties outside of the office. Restrictions under Order L-31, which became effective in our properties on September 15, 1942, have slowed the growth of our load. Our distribution systems are in good shape and we will not have the material needs in 1943 that we had last year, although there will be new industries and new loads as well as maintenance requirements, that must be provided for as they come along.

We are willing to continue to use ersatz so long as the good pipe and other supplies that we are accustomed to are being used to establish freedom and peace throughout the world, and we will continue to be patient while our military leaders are accomplishing the work that will restore to us our heritage — the unrestricted right to use the things we need and can afford to buy.

Codes Show How to Protect Buildings Against Air Raids and Sabotage

Comprehensive measures to protect Federal buildings throughout the nation against air raid hazards and sabotage were announced September 3 by Brigadier General Philip B. Fleming, Federal Works Administrator. The codes were drafted by two Interdepartmental Committees organized under the direction of Commissioner W. E. Reynolds of the Public Buildings Administration, Federal Works Agency.

In many instances the prescribed measures have been in effect since December 1941, because it was necessary to proceed with the work before the committees had completed their studies.

The program is all-embracing in scope and deals with the construction of splinterproof shelters, roof and wall reinforcing against falling debris. Two features are particularly noted: Gas protection and decontamination are not covered, and camouflaging of Federal buildings will be undertaken only when required by the military authorities and carried out under their direction.

Commissioner Reynolds stated that the protective measures are divided into three progressive Stages: A, B, and C. The stage for a specific building will be determined, as provided in the codes, by the state of the hazard and its functional priority. The state of hazard will be determined by the Republic Buildings Administration. Each protective measure to be taken under the three stages of protection is defined in the codes. Among the precautionary measures to be applied as the degree of hazard increases are: Increased training and equipment of the service units, such as wardens, fire, first aid, utility and warning units and rescue squads; the removal of glass in shelter areas and also the sub-dividing of such areas. The protection of windows from blast and splinters is also required to protect essential continuing activities.

The guarding of the various buildings, identifying of the employees and public, physical protective measures, and other means of protection against subversive activities are covered in detail. In this connection it may be interesting to note that the American Standards Association is at present developing a new standard on the protective lighting of buildings which is expressly designed to aid in the continuous fight against sabotage and theft.

Abstract from Industrial Standardization.

Gas-Air Premixing and Combustion for Modern Flame-Hardening

By
R. F. Apter and Harry W. Smith, Jr.
The Selas Company

FLAME-HARDENING was first done with the oxyacetylene torch. Between 1926 and 1930 oxygen-using methods of heating high-carbon steels locally beyond their critical temperatures and subsequently quenching to establish regional surface hardening were adapted to the regular production of crankshafts, gears, shafting, tools, ball races, dies, rails, valves and knives. During these years much technique of mechanization, flame control and quenching was learned.

Up to 1940 most applications of city gas and air premixtures to flame-hardening had been "home-made" by the user (or his fuel consultant, the gas man) and were confined to the treatment of light-section work. Practically no equipment engineered for high-rate gas-air flame-hardening was available for industry-wide application. Now, however, such equipment is available.

Researches involving fundamental approaches to the combustion of gas-air premixtures have recently brought about the development of new burners capable of concentrated heat deliveries at useful flame temperatures sufficient to widen greatly the scope of gas-air hardening.

Already flame-hardened on high-production schedules by gas-air methods are: machine tool transmission gears, bandsaws, hacksaws, valve stems and valve balls, automotive camshafts, military tank tread sprockets, automotive starter-flywheel gears, anti-aircraft and machine gun parts in amazing variety, shearing knives, skate blades, valve rockers, coupler jaws, huge road machinery drive gears and Army shell. Among the products similarly flame-annealed (by identical localized heat-treatment, but without quench) are: automotive steering-segment shafts, tie-rod-ball shanks, brass cartridges, telephone jacks, cold-headed bolts and the flame-cut ends of heavy armor plate.

Three types of heating elements operate on premixtures of city gas and air; all of them have been successfully adapted to flame-hardening and flame-annealing. All three types are refractory (rather than metal) burners, so that ports and combustion chambers will retain contour and dimensional specifications under protracted periods of high-temperature operation in open air. Thus, scaling, corrosion or melting-down of metal parts are eliminated.

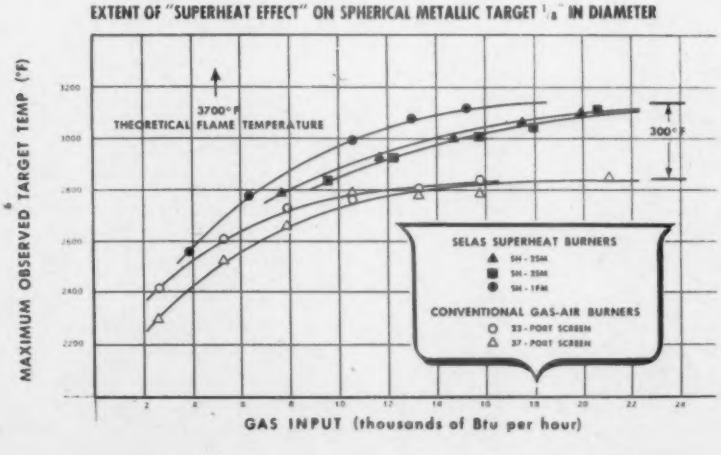
Of these three burner types of especial value in flame-hardening, the most recent and most widely used is the "superheat" or "compacted-combustion" variety. It operates as follows.

Hot Walls Raise Temperature

The burner is, in effect, a tiny furnace whose interior walls achieve white-hot incandescent temperatures. Thus, unusually large amounts of gas and air can be completely burned in a minimum space. The high radiant heat output of the incandescent refractory lining accelerates the rate of combination of gas and air, or "superheats" the reaction, so that higher rates of heat liberation can be attained than would otherwise be possible. Tests have shown that outlet gas temperatures are 200 to 300 F. higher than would be developed under similar conditions but without incandescent walls closely surrounding combustion and without constriction of the outlet. It must not be assumed that with this burner substantial radiant energy impinges upon the work. The outlet slots of the burners (which face the work) are very narrow. The considerable radiant heat developed in these burners is utilized almost wholly to accomplish the "superheating" effect as the combustion reaction proceeds.

Localized high-rate heating of special surfaces on metal parts, which typifies open-flame hardening and annealing, has been done for some years by high-frequency electrical induction methods and by burning acetylene, propane or city gas in the presence of bottled or generated oxygen. Both methods are effective but entail either high original investments for special high-frequency generators or considerable expense in maintaining supplies of compressed oxygen. Gas-air flame treating, on the other hand, permits the controlled selective heating of special sections of a part with regularly supplied fuels (manufactured gas, natural gas or propane) carbureted in long-familiar industrial equipment using only air to support combustion.

Where city gas can be mixed with air and burned to achieve sufficiently localized and accelerated rates of heating, operating economies are considerable. Installation and engineering costs are low in most cases. Further, les stime is required to readjust gas-air set-ups for different work pieces, and it has been found that gas-air hardening can produce certain types of work which cannot otherwise be handled.


EXTENT OF "SUPERHEAT EFFECT" ON SPHERICAL METALLIC TARGET 1/8" IN DIAMETER
MAXIMUM OBSERVED TARGET TEMP (°F)
3700° F THEORETICAL FLAME TEMPERATURE
300° F
SELAS SUPERHEAT BURNERS
CONVENTIONAL GAS-AIR BURNERS
33 - PORT SCREEN
37 - PORT SCREEN
GAS INPUT (thousands of Btu per hour)

The useful flame temperatures attained in air-gas installations are not so excessive that there is any hazard of "burning" the metal, even under prolonged periods of exposure to heat. New gas-air methods do, it is true, offer rates of localized part heating higher than attainable with conventional methods of burning premixed gas and air, which is the reason for many recent successes with the method. But flame temperatures have not been sufficiently elevated to endanger the metal part by the overheating so essential to guard against when burning fuels with pure oxygen. When the region to be hardened on a given work-piece includes sharp projections or protruding parts of light section, oxy-gas heating can decarburize, burn, or actually melt down the metal at edges and corners.

To overcome this tendency of oxygen-using flames, work pieces (such as gears with teeth of pitches too small for location of burners between adjacent teeth) need to be rotated rapidly with respect to the flames. With gas-air combustion these speeds of rotation can be materially reduced; in fact all movement between burners and parts to be hardened can often be eliminated. One important benefit of this slowing down (or elimination) of motion between heat source and workpiece is that the flame is given a greater opportunity to penetrate into interstices and depressions, such as between gear teeth.

Another factor responsible for the improved penetrating power of gas-air burners is the radiant component of the heat output from late burner designs. Radiant heat energy travels with the speed of light into every recess which can be "seen" by the burner even though the recess may be a "pocket" within which it is difficult to circulate hot combustion products.

Certain users prefer the somewhat less harsh heating of gas-air flames because it develops a more gradual transition of hardness (and brittleness) over the heat-line; that is, the microstructure changes (from the hardened Martensitic surface to the soft core) are less sudden.

Further demonstration of the ability to control gradual transitions from hardened surfaces to unhardened cores is given in the accompanying table, which cites results obtained by H. C. Wagner and A. L. Thayer in recent studies at Brown University. A line of three gas-air burners of the "superheat" or "compacted" combustion variety was used to harden one face of ½-in. square bars of 0.90-carbon tool steel. In this case the rod was translated longitudinally along the burner line at slow speeds and progressively hardened by a high velocity stream of water directed at the work within ¼ to ½-in. of the last burner in the line.

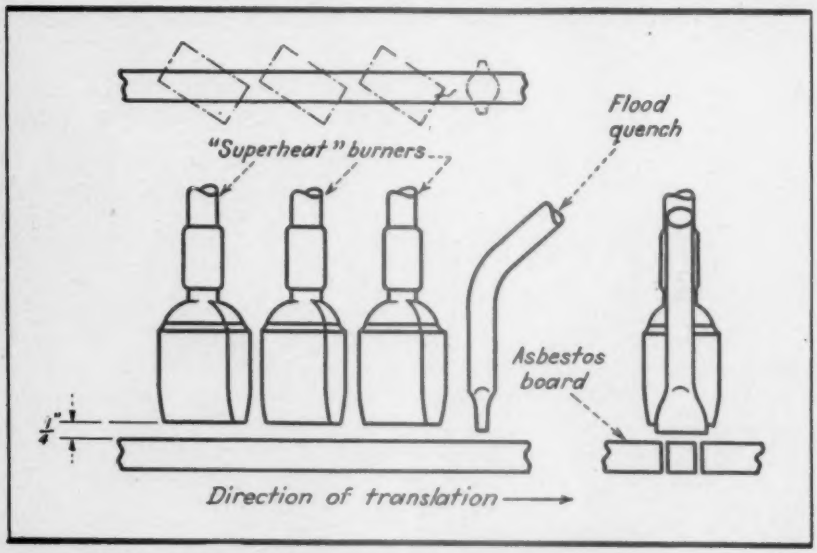
Over and above the characteristics of the hardened part itself, gas-air methods have manufacturing advantages. Skilled operators are not required; no space nor working time is needed for the storage and handling of bottled fuels or compressed oxygen; fuel supplies are continuous and almost everywhere available; piping and manifolding are extremely simple because only one-pipe supply is needed at each burner; the labor and mechanical complications of handling parts in lead and salt baths are eliminated; no special electrical wiring or maintenance is involved; and the floor space required is kept to a minimum.

On the other side of the ledger is the relative larger size of burners required for a given job (as against oxy-gas burners) and the consequent difficulties of "combing" individual teeth on large gears and the like.

Because the essence of flame-hardening and flame-annealing in open air is localized heating at such high rates that no distortion nor significant scaling nor decarburization can occur, it is essential to burn as much gas as possible through each burner. To so crowd into each burner as much fuel as can be completely combusted requires a high manifold pressure—the pressure of premixed fuel just ahead of the burner.

The "compacted" and "radiant" flame-hardening units operate effectively and satisfactorily at manifold pressures up to 3 lb. per sq. in. of fuel-air mixture. This pressure requires gas and air mixing systems

PROGRESSIVE FLAME HARDENING WITH GAS-AIR COMBUSTION



Depth Below Hardened Surface (Inches)	SCLEROSCOPE HARDNESS	
	Test A	Test B
0	80	80
0.01	75	74
0.02	74	60
0.03	70	55
0 04	71	55
0.05	65	40
0.06	60	35
0.07	48	33
0 08	45	Soft
0.09	45	
0.10	45	
0.11	43	
0 12	40	
0.13	35	
0.14	33	
0.15	Soft	

Data based upon tests conducted by H. C. Wagner and A. L. Thayer, May 1942, Brown University, Providence, R. I.

TEST CONDITIONS

Burners: Three refractory-slot burners.
Fuel: 530 Btu. manufactured gas premixed with air at 4½:1 ratio.
Specimens: ½-in. square bars of 0.90-carbon steel.
Quench: Water flood at room temperature. Located just beyond end burner.
Test A: Rate of translation of specimen —3 in. per min.
Test B: Rate of translation of specimen —4 in. per min.

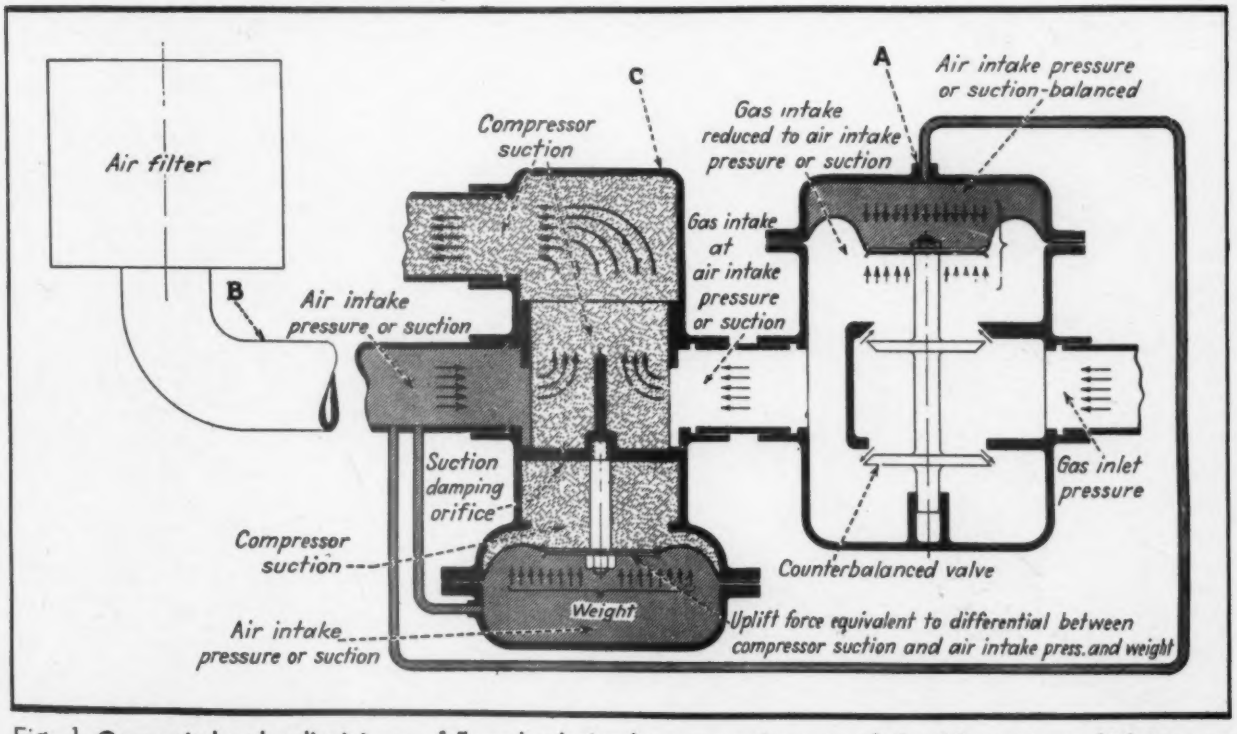

Air filter
B
Air intake pressure or suction
C
Compressor suction
A
Air intake pressure or suction-balanced
Gas intake reduced to air intake pressure or suction
Gas intake at air intake pressure or suction
Suction damping orifice
Compressor suction
Air intake pressure or suction
Weight
Counterbalanced valve
Gas inlet pressure
Uplift force equivalent to differential between compressor suction and air intake press. and weight

Fig. 1. **Compacted and radiant types of flame-hardening burners require gas and air mixing systems which incorporate integrally designed compressors in the mixture line. Gas is delivered to a governor *A* where it is reduced in pressure to that existing in the air intake *B* to the mixing valve *C*. Fuel-air ratio is automatically maintained**

with integrally designed compressors in the mixture line. A popular type of unit successfully used in flame-hardening is diagrammatically illustrated in Fig. 1. Such units can supply a large number of burners—all on the same supply line yet capable of simple independent adjustments without affecting one another.

Gas is delivered to a gas governor *A* where its pressure is reduced to exactly that existing at the air intake *B* of the mixing valve *C*. If the filter on the inlet air pipe should have measurable resistance to the flow of air by virtue of its construction or accumulations of dirt after long service, the pressure just ahead of the mixing valve, at *B* may be less than atmospheric. This condition will be automatically reflected in the gas pressure at the outlet of the governor *A*, and will not affect the ratio of air and gas which are mixed for combustion. With such a system, neither variations in inlet gas pressure nor in atmospheric pressure will affect the fuel-air ratio.

The mixing valve *C*, through which gas and air supplies are drawn by a compressor (not shown in the diagram), incloses a precision piston (or sleeve) which may be rotated by an external vernier adjustment to change the relative port openings exposed to the gas and air intakes. The movement of this piston up and down is controlled by suction from the compressor, or in other words, the demand of the burners. During such vertical movement of the piston or sleeve, the relative port openings for gas and air (machined to close tolerances for this very reason) are not varied. Once the vernier adjustment is set for the desired mixture, the volume ratio of gas and air mixed in the unit is not affected by variations in the amount of fuel required by the burners. It is not necessary to lubricate this sleeve-type of mixing valve.

The compressor is of the positive-displacement blade type; a bypass pressure regulator is provided so that the outlet mixture of gas and air delivered to the burners is maintained at constant pressure irrespective of the number of burners which may be turned off or on. The outlet pressure is adjustable by simple settings of the outlet mixture regulator. For turbine-type compressors, no outlet pressure regulator is required.

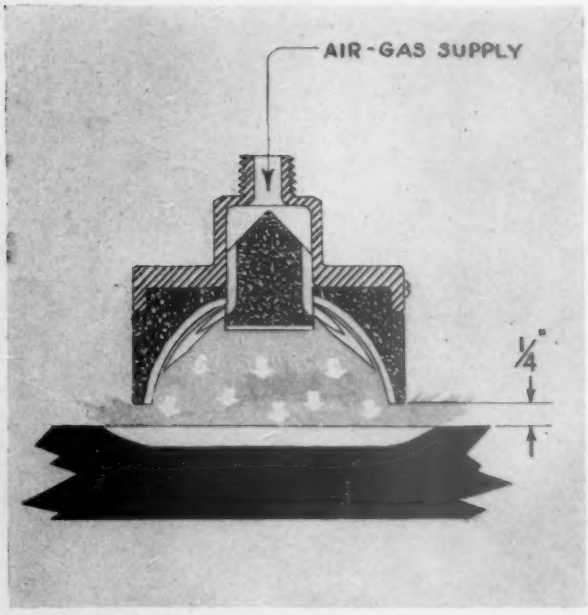
Such equipment is available in several designs and sizes, with maximum mixture capacities ranging all the way from 325 to 20,000 cu. ft. per hr.—and up to 60,000 cu. ft. per hr. or more if turbo-compressors are employed. In each case air-gas ratios and delivery pressures are automatically maintained over the entire capacity range.

Low-pressure-air inspirators, high-pressure-gas inspirators, mixing T's, dual-port proportioning valves or other popular methods of premixing gas and air for combustion in furnaces, are not generally capable of delivering pre-mixed gas and air in exact and constant ratio at pressures above ½ lb. per sq. in. Burners generally used for flame-hardening will actually operate with such combustion control equipment, but it is not possible to use them to their intended limits of capacity, unless mixture pressures well upward of 1 lb. per sq. in. are practicable. If gas-air burners designed for flame-hardening are not operated at the full capacity (i.e., at the high premixture pressures for which they are built), an unduly large number of burners and unacceptably slow rates of heating will result.

Unless full machine-premixing methods are employed it will not be possible to adjust the heating rate of any one burner (to accommodate for variations in metal mass, heat losses at part boundaries and temperatures required) without affecting the adjustment of other burners.

Two Basically New Types of Refractory Gas-Air Burners

"RADIANT" COMBUSTION



In this "radiant" burner for premixed city gas and air, the white arrows indicate radiant heat, the gray areas the flow of hot gases as convected heat, and the white areas incandescent surfaces. This burner is generally most effective in hardening the surfaces of heavy sections and is characterized by its large heating area.

Nature of Heat Liberation

Multiple radial flames in scrubbing contact with white hot walls of open refractory cup-like concavity.

High uniform incandescence of sizable concavity develops important quantity of *radiant* heat in addition to heat contained in gases of combustion.

Character of Heat Transfer to Work

High rate of *radiant* energy transfer from large surface area of refractory (up to 40 sq. in. per burner) at temperatures as high as 3000° F. Incandescent surface close to and faced toward work.

Relatively low velocity, dispersed stream of even-flowing combustion products.

Burner Outlet Area

2⅜" dia. cup	(4.43 sq. in)	32,000 Btu/hr. (1 lb.)
5½" dia. cup	(23.75 sq. in.)	103,000 Btu/hr. (1 lb.)
6⅝" dia. cup	(34.5 sq. in.)	103,000 Btu/hr. (1 lb.)

Where Used

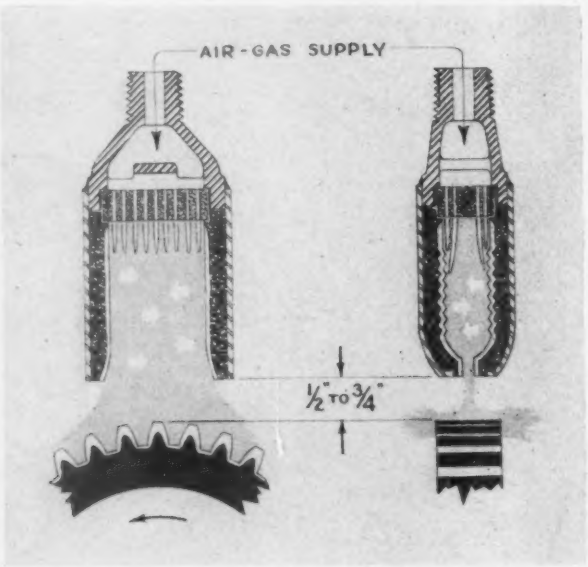
For highest-rate heating where area to be heated is commensurate with available cup area or multiple thereof.

Where mass of metal in vicinity of surface to be heated is great and reasonable fit of surface to burner outlet exists.

Where it is desired to eliminate blasts of combustion gases.

Many special burner designs utilize combinations of both types of combustion (e.g. blades, saws, skates, etc., can protrude down into the slots of "superheat" burners to utilize direct "radiant" heating also). Further, any "radiant" burner closely faced to flat work automatically "compacts" its combustion and shares attributes with the purely "superheat" type above analyzed.

"COMPACTED" OR "SUPERHEATED" COMBUSTION



Refractory-lined burners are easily adapted to the flame-hardening of gear teeth and other surfaces where the mass of the metal part in the immediate vicinity of the surface is not too large. The white arrows indicate radiant heat and the gray areas indicate the flow of hot gases.

Nature of Heat Liberation

Multiple parallel flames in scrubbing contact with white-hot walls of confined *(compacted)* refractory chamber.

Up to 40 million Btu per hour liberated per cubic foot of combustion space.

High incandescence of chamber accelerates (*superheats*) air-gas inter-reaction.

Character of Heat Transfer to Work

High-velocity stream of combustion gases free from secondary air dilution and capable of heating small objects faster (and to higher temperatures) than normal.

Extreme concentration of superheated combustion gases in thin tongue or round torch.

Where Used

For gears, shot and thin-section blades, saws, pins, projections, etc.

Where extreme localization of heat is desired.

Where metal mass (or ability of part to conduct heat away) is small in immediate vicinity of surface to be heated.

Burner Outlet Area

¼" dia. hole	(0.05 sq. in.)	12,000 Btu/hr. (1 lb.)
⅜" dia. hole	(1.01 sq. in.)	26,500 Btu/hr. (1 lb.)
⅛" x ¾" slot	(0.09 sq. in.)	12,500 Btu./hr. (1 lb.)
⅛" x 1⅛" slot	(0.14 sq. in.)	25,000 Btu/hr. (1 lb.)
3/16" x 1 15/16" slot	(0.36 sq. in.)	45,000 Btu/hr. (1 lb.)
¼" x 15" curved slot	(3.75 sq. in.)	1,000,000 Btu/hr. (1 lb.)

History Repeats

WAR AND TAXES have always produced problems for the gas utilities. During the Civil War they were confronted with taxes, rate problems and increasing production costs. The following is a reprint from the March 1st, 1864, issue of American Gas Light Journal:

The Washington Gas-Light Company

Petition to Congress

To the Honorable the Senate and House of Representatives of the United States:

The enormous price at which coal, iron, and all other materials entering into the manufacture of gas are now held, together with the very great advance in wages paid for labor, render it impracticable for this company, without a ruinous sacrifice, to continue to supply illuminating gas at existing rates; and I am, therefore, instructed by our board of directors to lay before your honorable body the following facts, and respectfully to ask from Congress that reasonable measure of relief which it only has the power to grant, and which we are assured its sense of justice will induce it promptly to extend.

At the commencement of the present war the price of gas was fixed by the Act of Congress of June 25, 1860, which prescribed a uniform rate, both for the Government and citizens of Washington, of 35 cents per 100 cubic feet, subject to a discount of 10 per cent, on all bills paid within five days from presentation making the net cost to all consumers 31½ cents per 100 cubic feet. This continued to be the rate until the passage of the Act of July 11, 1862, "making further appropriations for sundry civil expenses of the Government for the year ending June 30, 1863, by the third section of which the company are prohibited from charging the Government more than 28 cents, and citizens more than 30 cents, per 100 cubic feet for gas supplied to them, both rates subject to a discount of 10% on bills paid within five days from presentation." Under this act, which is now in force, the company only receives 25 2/10 cents and 27 cents per 100 cubic feet for gas furnished to the Government and to private consumers respectively. When the law making this great reduction was passed, it bore hardly on the company, inasmuch as coal was then 40 per cent higher than in 1861, and

Office Gas-Light Company
Washington, December 8, 1863

labor also had somewhat advanced; still we aquiesed in the measure in the hope that this state of things would prove exceptional and prices soon return to their former standard. It is needless to say that this expectation has not been realized, but that, on the contrary, labor and materials of every kind have advanced in an unprecedented manner, and the tendency of prices is still upward. Confining myself to some of the prominent objects connected with the manufacture of gas, I beg to subjoin a comparison of existing prices with those prevailing at the commencement of the war (April 1861), and at the passage of the Act of July 11, 1862, above referred to:

	April 1861	*July 1862*	*Dec. 1863*
Coal, cost per ton in shed	$5.00	$6.92	$11.52
Lime, per bushel	0.07	0.07	0.09
Iron-work (retorts, etc.) per lb.	0.01½	0.01½	0.04
Fire-bricks, etc., per 1,000	25.00	25.00	40.00
Tiles, average each	0.90	1.00	1.30
Fire-clay and cement per bbl.	1.00	1.10	1.50
Daily wages of men at works	1.25	1.25	2.00

From the foregoing it will be seen that coal and iron have advanced over 125 per cent since the commencement of the war; lime, firebricks, etc., from 30 to 60 per cent, and wages 60 per cent; and it is obvious, therefore, that what might have been a fair price for gas at that period, or in July, 1862, has ceased to be so at the present time.

This view is enforced by the recent action of the City Councils of Philadelphia. The gas-works there are owned by the city, and the gas is supplied to consumers at about cost of manufacture, thereby excluding the idea of profit, which, of course, no one would expect of a private company; yet that city, the very center of the coal trade, has been compelled to put up the price of gas nearly 20 per cent, and to require its customers in addition, to pay the Government Tax of 15 cents per 1,000 feet. If Philadelphia, with the coal at her doors, and an annual consumption (1862) of about 656,970,000 of cubic feet of gas, cannot make gas for less than $2.50 per 1,000 cubic feet, ought our company, which draws its supplies of coal from that city at an increased expense for freight alone, at the present time, of $3.00 per ton, and with a total consumption of gas for 1862 of only 104,356,132 cubic feet, to be expected to sell it at $2.52 per 1,000 feet? I cannot believe this question will be answered affirmatively, nor that the company will be deemed unreasonable in asking that Congress will repeal so much of the third section of the Act of July 11, 1862, as fixes the present inadequate prices of gas, the effect of which will be to revive the rate existing at the commencement of the war, under the Act of June 25, 1860.

By order of the Board of Directors.
GEORGE W. RIGGS, JR.
President,
Washington Gas-Light Company

Circular of The Washington Gas-Light Company to Their Stockholders

December 30, 1863

The undersigned, pursuant to instructions of the Board of Directors herewith transmits for your information, a copy of a resolution passed by the Board at its meeting this day.

The accompanying memorial to Congress, dated December 8, 1863, will fully explain the reasons for this action.

Very respectfully,
J. F. BROWN, Secretary.

WHEREAS, The prices of coal, iron, labor, and all materials entering into the manufacture of gas, and the cost of maintenance and repairs of the works of this company, have *increased* from 60 to over 120 per cent, and Congress has *reduced* the price of gas to consumers more than 17 per cent, thereby rendering it impossible to manufacture and sell gas without loss; and whereas, the operations of the company for the past six months show no profit; there,

RESOLVED, That it is not in the power of the directors to declare a dividend.

Hiring of Personnel

Insistence on Quality of Personnel Permits Continued High Standard of Service and Minimizes Sabotage Hazard

By

Lucius S. Flint

OFFICIALS of the Southern Counties Gas Co., Los Angeles, believe that in spite of the increasingly severe labor shortage it's only common sense and good business to continue a policy of rigid care in both hiring and follow-up observation of replacement personnel.

If there's any place in the nation where a utility organization would have a right to get panicky about the labor problem it's in Southern California. This area has one of the highest concentrations of war-industry in the nation. The wage scale in these plants has reached a terrifically high level. A lack of housing in many districts has made it impractical to bring in labor from other parts of the country. Even women are becoming a scarce commodity on the labor market.

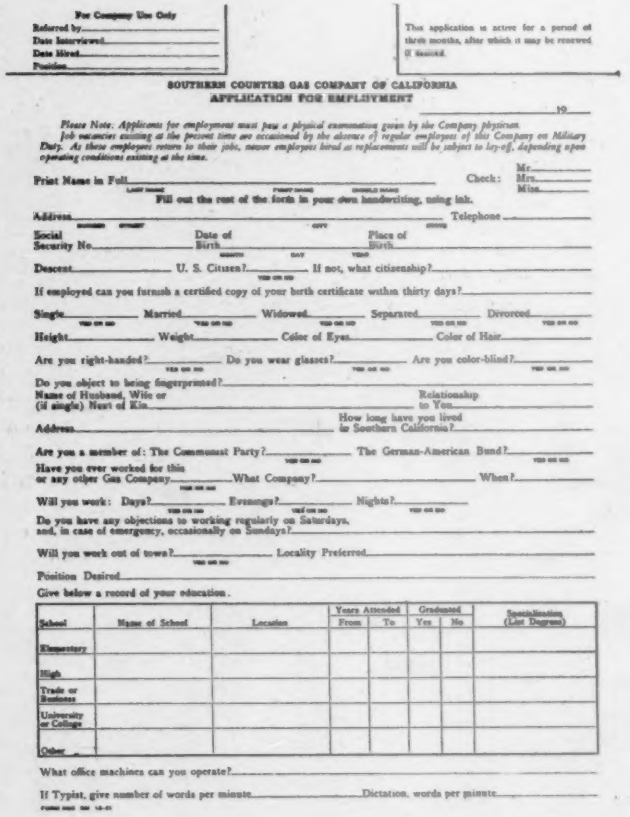
But heads of Southern Counties have refused to get panicky. They've wisely realized that restriction of company activities has reduced the need for personnel rather than expanding it. They take the stand that under present conditions at least it is possible to recruit enough *first-class* people to fill vacancies as they occur.

Accordingly, this company's personnel department is being just about as selective as it ever was. Experience here seems to indicate pretty strongly that as far as gas companies are concerned, attitude of the executives toward the labor problem is the thing that really counts. If you're determined to maintain a high standard in spite of conditions you can go a long way in that direction.

"There are two main reasons why we should continue a program of careful selection," says Personnel Manager Ludlow Shonnard, Jr. "The first has to do with the importance of this industry in the war effort. We have an essential job to handle and we can't do it right with inferior personnel.

"The second is concerned with the long-range view of public relations. Obviously, we must cut down on activities that aren't absolutely essential—and all companies have done that. But if the public is to receive the right impression, we must see that performance on remaining activities is kept up to a high standard. You can use the war as an excuse for poor service and alienate affections of your customers, or you can make a sincere effort to maintain quality and thereby build an even greater measure of good will than has existed in the past. Naturally, all this depends on getting and retaining the right type of personnel.

"The job is sometimes a discouraging one. As losses of experienced people increase, as turnover of new employees grows, the problem will



For Company Use Only
Referred by
Date Interviewed
Date Hired
Position

This application is active for a period of three months, after which it may be renewed if desired.

SOUTHERN COUNTIES GAS COMPANY OF CALIFORNIA
APPLICATION FOR EMPLOYMENT

19

Please Note: Applicants for employment must pass a physical examination given by the Company physician. Job vacancies existing at the present time are occasioned by the absence of regular employees of this Company on Military Duty. As these employees return to their jobs, newer employees hired as replacements will be subject to lay-off, depending upon operating conditions existing at the time.

Print Name in Full (Last Name, First Name, Middle Name) Check: Mr. Mrs. Miss

Fill out the rest of the form in your own handwriting, using ink.

Address (Number, Street, City, State) Telephone

Social Security No. Date of Birth (Month, Day, Year) Place of Birth

Descent U. S. Citizen? (Yes or No) If not, what citizenship?

If employed can you furnish a certified copy of your birth certificate within thirty days?

Single (Yes or No) Married (Yes or No) Widowed (Yes or No) Separated (Yes or No) Divorced (Yes or No)

Height Weight Color of Eyes Color of Hair

Are you right-handed? (Yes or No) Do you wear glasses? (Yes or No) Are you color-blind? (Yes or No)

Do you object to being fingerprinted?

Name of Husband, Wife or (if single) Next of Kin Relationship to You

Address How long have you lived in Southern California?

Are you a member of: The Communist Party? (Yes or No) The German-American Bund? (Yes or No)

Have you ever worked for this or any other Gas Company What Company? When?

Will you work: Days? (Yes or No) Evenings? (Yes or No) Nights? (Yes or No)

Do you have any objections to working regularly on Saturdays, and, in case of emergency, occasionally on Sundays?

Will you work out of town? (Yes or No) Locality Preferred

Position Desired

Give below a record of your education.

School	Name of School	Location	Years Attended From	Years Attended To	Graduated Yes	Graduated No	Specialization (Last Degree)
Elementary							
High							
Trade or Business							
University or College							
Other							

What office machines can you operate?

If Typist, give number of words per minute Dictation, words per minute

Form 4663 Rev. 12-41

The two sides of the application form, 8½ by 11", used by Southern Counties Gas Company.

Give below a record of your employment for the past ten years:

Dates of Employment	Position	Salary	Name and Address of Company or Employer	Name and Title of Person under whom you worked
From				
To				
Why did you leave?				
From				
To				
Why did you leave?				
From				
To				
Why did you leave?				
From				
To				
Why did you leave?				
From				
To				
Why did you leave?				

List below three personal references (Not relatives or former employers listed above):

Name	Address (Give number, street, city)	Business or Profession

List below your dependents: (Check whether totally or partially dependent on you)

Name	Age	Relationship to You	Totally Dependent	Partially Dependent

Have you any relatives or friends working for this company? (Yes or No) If so, list them:

Name	Position	Relationship to You

I hereby certify that the foregoing information is true to the best of my knowledge and belief, and understand that any misstatement of fact will, if I am employed, be cause for immediate dismissal.

The following is my true signature:

(Signature)

get tougher and tougher. But with enough sincere effort it's one that can be pretty largely licked. A willingness to try and keep trying is the main requirement."

Personnel Department Has Real Authority

Of course, one of the reasons for this company's attitude toward the present personnel problem lies in the fact that an unusual amount of attention has always been given the subject. For some 10 years, the personnel department has been a lot more than a mere hiring hall. This department has control not only of hiring but also of promotions, discharges and industrial relations dealings. Thus, the personnel manager knows the results of his hiring methods, has the opportunity to improve on them constantly.

Incidentally, this company's experience with centralized control of all personnel matters have been most favorable over a period of years. Besides minimizing the number of hiring errors, the control plan helps develop capable employees rapidly, thus keeping them satisfied and avoiding turnover. It provides an especially satisfactory procedure for handling employee grievances. It makes possible the setting up of definite standards and specifications covering various classes of workers. It aids in development of better training methods.

Uses More Complete Application Than Before

One of the first places in which the company's policy of continued selectiveness is reflected is in its application form. Instead of dropping the formal written application, as quite a number of companies have done of late, Southern Counties has expanded its form.

In addition to requiring complete personal data on the applicant, along with business experience information, facts on education, references and so on, the Southern Counties form gets full background as to the applicant's loyalty to the nation. He must show his citizenship. He must agree to furnish a birth certificate within 30 days after hiring. He must state whether he's ever been a member of organizations such as the German-American bund.

No person is considered as an employable unless he fills out the application completely. The statements given, incidentally, are thoroughly verified by an independent checking agency.

SOUTHERN COUNTIES GAS COMPANY OF CALIFORNIA

INTERIM PERSONNEL REPORT

Probationary Employees

Please return this report in a sealed envelope direct to the Personnel Department.

Date_____, 19__

Name of Employee_____ Department_____

Position_____ District_____

Date Employed_____ Date of Expiration of Probationary Employment_____

Prepared by_____

1. What qualifications has this employee for long term (regular) employment?_____

2. What faults or weaknesses (barring inexperience) has this employee which would have a bearing upon long term employment?_____

3. In your opinion should this employee: (Check)
   (a) Be made a regular employee at the end of the probationary period? _____
   (b) Be released before the expiration of the probationary period? _____

4. Remarks_____

Personnel Report Form Size 8½ by 11".

If the applicant is hired, he goes through a six-month probationary period in which his work and his actions are under the closest surveillance. During this time, the company receives a full report on the probationary worker from three of his supervisors. These reports cover observed qualifications for permanent employment, faults or weaknesses. Each supervisor indicates whether he thinks the person should be released before the end of the period or made a regular employee at the end of the period.

Once a year thereafter, each employee is reported on again by three supervisors. These reports cover matters of working efficiency, attitude toward work and loyalty to the nation. In case a discharge is recommended by supervisors after the probationary period, the personnel department gives the employee a chance to tell his side of the story and then makes an independent investigation. The final decision subject to approval of the company President, is made on the basis of that investigation.

This whole procedure is actually being followed through even more thoroughly now than it was before the war. The company takes the stand that under current conditions, performance on all scores *must* be right.

Particular attention is paid to the matter of employee loyalty to the nation. Southern Counties feels that government fingerprinting of workers doesn't relieve the company of its responsibility for interest of employees in the welfare of the nation. Of course the careful original investigation of workers minimizes the chance for a disloyal person to get into the organization. But the mere fact that an individual has no criminal record doesn't necessarily mean that he's a good American. Southern Counties takes no chances—any report of even slightly questionable conduct is carefully investigated.

The company feels that in an essential public utility a frank attitude of watchfulness on this score is as beneficial to the employee as to the organization and to the nation as a whole. In times like these, any unfounded gossip about an employee shouldn't be allowed to continue, should be cleared up by prompt investigation. On the other hand, an actually disloyal person must not be permitted to jeopardize the lives of others.

There is also continued insistence on employee courtesy to the public. The attitude of the probationary employee on this matter is an important factor in his being hired or rejected. All during the probationary period, the courtesy theme is constantly drilled into him.

Personnel Records Constantly Analyzed

Despite the difficulties attendant on this work because of the increased hiring necessary, the personnel manager devotes a great deal of time to constant analysis of old personnel records. When a man is discharged or lost to war industry, Mr. Shonnard carefully reviews his history with the company in an attempt to locate the factors involved. By the same token, when a man is promoted and fails to make the grade in his new job, the personnel department attempts to discover why.

"We're constantly attempting to utilize past experience as a guide for the future," Mr. Shonnard explains. "But we want to be sure it's real experience. We never draw any long-range conclusions based on the facts involved in a single case or even a hundred cases. We collect data over a long enough period of time to get an average picture.

"Of course the whole thing comes back to whether a personnel department exists in fact or in name only. It it's nothing more than a hiring hall, you might as well quit before you start. If the department has authority and time and facilities for its work, then you can get somewhere."

Operating Kinks

By

W. F. Schaphorst, M.E.
Newark, N. J.

What is The Pull or Push Per H. P.?

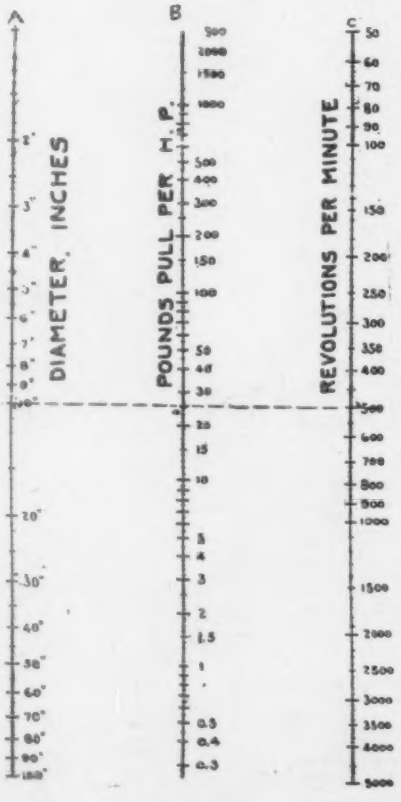
Here is a handy chart for quickly solving a multitude of problems that are more or less vexing or time-consuming. All you have to do is—lay a straightedge across the chart and there's the answer in the middle column.

For example, you want a chain for a 10-inch sprocket running at 500 r.p.m. to transmit one h.p. How strong must the chain be?

The dotted line drawn across the chart shows how it is done. Connect the 10" (column A) with the 500 (column C) and column B gives the answer immediately as 25.2 pounds. If you want a chain that will transmit 10 h.p. you merely multiply 25.2 by 10, which gives 252 pounds as the necessary strength.

If you are designing a belt drive the chart can be used in the same way for determining the "effective pull"—which is the difference in tension between the tight and the slack sides.

For gear drives the "push" is found in the same way. In other words, if the diameter of the pitch circle is 10" and the gear is to make 500 r.p.m., the tooth must have a "pushing strength" of 25.2 pounds for each horse power to be transmitted.



In other words, this chart can be applied to a wide variety of drive problems including flat belts, V-belts, chains, ropes, cables, gears, etc.

Making Highest Grade Threaded Joints

It is not uncommon to find pipe fitters who claim that they do "superior" work and so do not lamp-wick their brass threads. The chances are however, that they will have trouble with leaks where the fitter who does wick his threads will not have trouble, other conditions being the same.

During the past few years considerable research work has been done on lamp wicking and real strides have been made in the manufacture of the product. As a result all of the better piping contractors are now using lamp wick on brass pipes.

The pipe fitter who does not use wicking usually uses a "dope," or compound. It is much quicker to simply apply compound and make up a joint than it is to apply both wicking and compound. The fitter who uses wicking usually also uses compound and does not use wicking only. He uses wicking and compound because he wants to make the best joints that can be made.

Less time is required to wick iron pipes than is required to retrace threads with new taps and dies to insure a tight fit. In order to make sure some pipe fitters retrace with new taps and dies and in addition use lamp wicking and compound. We are informed that in Germany the mechanics wick all iron pipe threads as well as brass threads.

Carelessness is the principal cause of leaks. The entire burden of keeping joints tight is placed on joint compound, perfect cutting dies, and brute tightening force. There was a time, and not so long ago either, when it was believed that the pipe fitter who used lamp wicking was a "sloppy" mechanic. It was thought that the use of wicking was comparable to stuffing an old pillow into a broken window for prevention of leaks. But we were wrong and have changed our minds in spite of the pointed statement by Henry L. Mencken who said: "When a man tells me that anything I have written has caused him to change his mind I put him down for an ass." It is not poor policy to change your mind when you have proof that you have been wrong.

Your Job—SERVING THE ARMED FORCES AND THE HOME FRONT . . .

Between the war and home fronts, more of your service is needed than ever before—yet you must meet this unprecedented demand with less equipment, less help, less of everything. Quite a job . . . and it's our job to help you where we can. Our business is pipe line products and here's how we can help you.

★

Our Job—SERVING THE ARMED FORCES AND YOU!

—Pipe line systems must be maintained and to keep you supplied with the materials you need, we are doing everything in our power to make the most important items available.

On some products, such as Styles 52A, 73 and 80 (Repair Sleeves); Style 90 (Super Service Fittings); Style 65 (No-Thread Fittings); Style 60 (Bell-Joint Clamps), and other clamps, many sizes of couplings, we can make prompt shipment. On others we can ship fairly soon. All orders, of course, must carry priority ratings.

In some instances, we may not be able to conform exactly to your specifications but usually we can provide a satisfactory substitute. When we haven't got what you want or we cannot get it, we will notify you promptly.

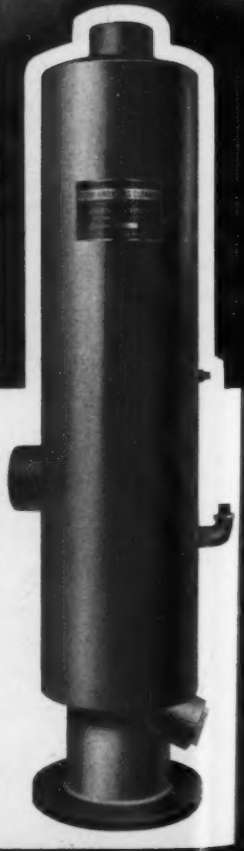
Our Job is to help you do *Your Job* so write, wire or phone

DRESSER MANUFACTURING COMPANY • BRADFORD, PA.

DRESSER PIPE COUPLINGS AND REPAIR DEVICES

"OLD DUSTY" may be stealing your gas...your profits

Cutting a gas line and blowing it out is good. Keeping dust out is better.



HOW can you tell when "Old Dusty" has been on the job? Easy! He scratches deep grooves on regulating valves, meter valves, orifice plates, displacement meters . . . on all equipment through which gas flows. Result: You lose money because unmetered gas gets away from you, proper pressures cannot be maintained, equipment wears out, your customers complain.

WHY PUT UP WITH DUST, RUST, SCALE AND LIQUID CONDENSATES WHEN THIS CLEANER COSTS ONLY $95

"K" Series has been designed for—City Regulators . . . Small city gate stations . . . Town border stations . . . Medium and large industrials. (*Model shown is K-6.* It will condition 396 MCF standard gas per day flowing at 30# gage pressure.)

Keep this dust out of YOUR lines

ASK FOR FULL INFORMATION REGARDING THE "K" SERIES GAS CLEANER. Please state where it will be placed, maximum gas volume MCF hour, minimum and maximum pressures . . . and we will quote you on the size and type you need.

BLAW-KNOX
GAS CLEANERS

War Problems for the Public Utilities Safety Engineer

By

J. B. Davies

Mine Safety Appliances Co.,
Pittsburgh, Pa.

THE National Safety Council, headquarters in Chicago, recently held its 31st Annual Safety Congress. The Council is composed of sections representing many industries. There is a Public Utility Section.

At the recent annual meeting, a paper was read by J. B. Davies, Manager, Industrial Department, Mine Safety Appliances Co., Pittsburgh, Pa., on the subject of general safety equipment.

The following is an abstract from Mr. Davies' paper.

Safety equipment occupies a rather high place in the list of essential articles needed to advance our war efforts. The War Production Board has recognized the importance of safety equipment by assigning to it a separate group in the Health, Safety and Technical Equipment Section. The public utility group as a whole has not been specially favored in the matter of priorities since with the initiation of the priorities system, electric and gas companies, water and steam heating companies were granted for general use only an A-10. This has been increased in order to an A-5, an A-2, and more recently an AA-5 for all operating supplies, and an AA-2x for materials urgently needed for repair in case of breakdown. Telephone companies now have an A-1-a priority. The priority rating of other essential industries has, however, increased in proportion so that the public utility group has never had first call on available equipment. Special high priority ratings have been granted specific projects such as the construction of electric generating stations where the need for additional power was critical, but generally, the public utility group has not been in a preferred position.

The manufacturers' ability to obtain necessary raw materials for manufacture is controlled by the priority rating of the orders which he in turn receives from his customers. He is absolutely bound by law to make shipments in order of highest priority (if his entire output is consumed by orders bearing higher priority than those which the public utility industries can provide, then the public utility orders must wait.) Most manufacturers operate under what is known as the PRP—Production Requirement Plan, under which he applies to the War Production Board for permission to purchase his estimated raw material requirements for the following quarter.

The degree of consideration given his request and the priority ratings granted for the purchase of his material depend a great deal upon the percentage of essential business which he is doing as evidenced by the ratings of his customers' orders. Further, in granting the manufacturer a high priority to enable him to purchase materials which are critical, he is required to demand priorities of a specified rating when he, in turn, sells products incorporating the aforementioned critical materials. I trust this will give you some idea of why we must ask you for priorities on most of your safety equipment orders and why we must at times give preference to the orders of others.

Respirators and Masks

Until a short time ago, practically all respirators were made from aluminum and rubber. We all know that aluminum may no longer be used, and crude rubber is becoming almost as scarce. We and most other manufacturers have turned to plastics By careful planning we have developed approved respirators which are equally comfortable to wear and have advantages which far exceed those originally made with aluminum. Such respirators are available for fairly prompt shipment, whereas those of aluminum may no longer be processed. Take care of the respirators you now have by carefully washing them free of dirt, condensed moisture, and perspiration oils at the end of each work period. This will greatly lengthen their life. Rubber is used in respirator facepieces because it provides the necessary flexibility and forms a seal to the face with a minimum of tension. Cotton facelets are available for use with most respirators and it is our experience that they will almost double the normal life of the rubber parts by forming a partial barrier between the rubber facepiece and the oils of the skin.

The heart of the respirator is the filter. Filters are required to be replaced frequently if the efficiency standards and low breathing resistance are to be maintained. Fortunately, most filters on approved respirators are made from relatively non-critical material. WPB has prohibited the use of all rubber head straps for respirators and has limited to 12 inches per respirator the total length of elastic that may be used regardless of whether the respirator is equipped with one or two head straps.

Gas masks will probably present a serious problem in the near future due to continued curtailment of the crude rubber supply. Six months ago, gas mask manufacturers were permitted to use crude rubber in proportion of 140 per cent of a comparative base period. The allowable usage has been curtailed monthly and in addition, limitations are now placed upon the maximum percentage of crude rubber which may be used in compounding the rubber for gas mask facepieces. At present, the allowable maximum is 50 per cent by volume—a much lower percentage than we formerly used. This presents a serious problem, since in addition to elasticity and long life, we must be careful of the toxic properties wherever the part is in contact with the skin, and this limits the grade of reclaim rubber that may be used.

The rubber compound for corrugated tubes is limited to 45 per cent by volume, while for exhalation valve assemblies, up to 90 per cent by volume is permitted. For hose employed in gas masks, not more than 35 per cent by volume may be used. Synthetic rubber has possibilities but the small available supply is diverted to what WPB considers more critical use. All rubber headbands for mask facepieces are now prohibited, and most manufacturers will probably revert to elastic in some form. This will emphasize the need for careful care of the mask equipment which

you now have. As far as possible, locate or store them in cool places since heat, of course, deteriorates rubber rapidly. See that the masks are removed from their containers at least once monthly and the rubber parts worked or massaged between the fingers. This will prevent the rubber parts taking a "set" and will prolong their life. After each use, see that they are carefully cleaned to remove oil or grease. If a sterilizing agent is used, the mask should be thoroughly rinsed in water to remove all trace of it, and then dried thoroughly before returning to its case.

When the mask is returned to its case, see that the facepiece is properly placed on the form with no parts turned under, crimped or pinched. Since the hose forming the principal part of hose masks contains probably enough rubber to make a dozen canister masks, it is obvious that as rubber becomes more scarce, hose masks should become less available. This would dictate special care of your present hose. If, at the end of the work period, the hose is covered with oil or sludge, the lengths of hose should be uncoupled and cleaned with live steam, taking care not to hold the nozzle down too close to the hose.

All-service type canister should be returned to the manufacturer for credit, since certain parts may be reused. I do not believe that any manufacturers have found it practical to salvage other types of canisters.

The use of steel in signs having an area greater than 36 square inches, and for bulletin boards, is prohibited. I believe that several manufacturers propose to use Masonite for signs and at least one manufacturer is producing a substantial bulletin board made entirely of wood.

Gas is Ammunition

don't waste it

save gas with Carboseal Anti-Leak

YOU can prevent the loss of a vital war material — gas — by using CARBOSEAL Anti-Leak to stop the leaks in the bell-and-spigot joints of dry-gas systems. CARBOSEAL Anti-Leak is a liquid that penetrates the cells of the hemp and jute fibres in the joint packing and causes them to swell approximately 44 per cent in volume, thereby sealing leaks.

CARBOSEAL Anti-Leak is especially recommended now as a gas-saver because . . . only a small crew is needed to apply it . . . critical materials are not needed . . . the cost of the treatment is low, averaging about 50 cents per joint . . . and excavation and repaving are practically eliminated.

CARBOSEAL Anti-Leak works. Reports show that joints in mains treated seven years ago are still tight. The Table of Leakage Reduction, compiled from hundreds of test results on file, indicates results typical of general field experience.

TABLE OF LEAKAGE REDUCTION		
Diameter of Main—Inches	Length of Main—Feet	Percentage Leak Reduction
8	620	100
6	582	95
6	92	100
4	1,200	100
4	1,700	91
3	618	100
3 equiv.	43,800	60

Over 250 gas companies now use CARBOSEAL Anti-Leak in their routine maintenance programs.

For further information on the uses of the Anti-Leak and methods for applying it, write for the book, "Correcting Leakage in Gas Distribution Systems with CARBOSEAL Anti-Leak."

CARBIDE AND CARBON CHEMICALS CORPORATION

Unit of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York, N. Y.

The word "Carboseal" is a registered trade-mark of Carbide and Carbon Chemicals Corporation.

PRODUCERS OF SYNTHETIC ORGANIC CHEMICALS

First Aid Kits

First aid kits fall in the classification of safety equipment and it is a very general custom for public utilities to carry a first aid kit on every piece of mobile equipment. The case is usually made of steel, and a few months ago WPB was about to completely prohibit the use of steel for first aid kits. We presented a strong case to WPB with the result that a compromise was effected. It was agreed that steel cases might be continued provided they were supplied only for uses where the kits are carried exposed to weather conditions, such as on line trucks. We manufacturers are obligated to develop cases made from plywood, or other less critical materials for use where the kits are not exposed to extreme weather conditions, and such work is now in progress.

It is rather certain that the time will come when steel cases will not be available and, therefore, you should conserve to the best of your ability those which you now have. Handle them more carefully. Give them an occasional coat of paint to prevent rusting. A good steel case protects the first aid materials and it is the ideal container so long as it is available. Anything made of metal such as safety pins, tourniquet buckles, scissors, tweezers, etc., is becoming more and more difficult to obtain. At the present time, no priority is required for first aid materials unless contained in a steel case.

Asbestos suits and gloves for emergency or fire fighting have been in quite some demand by the public utilities. Suitable asbestos is becoming more and more difficult to obtain, but at the present time asbestos clothing is available without too high a priority. To prolong the life of asbestos clothing, it should be stored in a dry place. If it becomes necessary to clean asbestos clothing, it

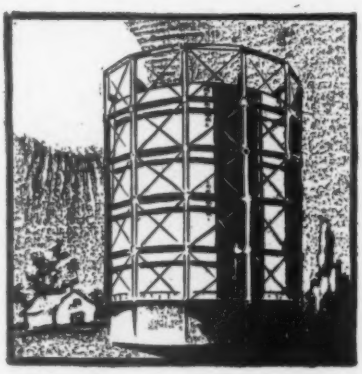
should be dry-cleaned rather than washed.

Instruments for detecting or warning of the presence of combustible, toxic or explosive gases are likely to become more and more difficult to obtain. Such instruments are composed principally of metals of a relatively critical nature, meters and electrical fixtures. Metals such as brass and copper are becoming more and more critical and substitution of cast iron greatly increases the weight of an instrument. Meters of the type required for instruments are subject to long delivery delays due to the fact that most meter manufacturers are working to capacity on orders of instruments for planes.

Electrical parts such as switches, relays, contacts and other fixtures are very difficult to obtain. I would advise you to take very good care of those instruments which you may now have. Precision instruments should never be handled roughly. Avoid using them knowingly in concentrations of gas beyond the range for which they are designed. When sampling, avoid allowing moisture or dust to enter the instrument. In those types operating from dry cells, be sure the switch is turned off after each use to prevent shorting the cells and contaminating and possibly injuring the instrument. Follow carefully the manufacturer's instructions regarding care and maintenance.

Protective Hats

Protective hats have had a wide field of application in the safety program of the public utilities. They are the standard work hat on construction projects. They are used by distribution departments, both in excavating for pipe lines and in electric companies by linemen. The demand for protective hats is exceeding the supply. Higher and higher priorities are being applied to orders so that it is essential that you conserve your available supply of protective hats if your men are to have this protection. We are, at the present time, conducting a conservation program throughout the industries which use protective hats. This program is built around the theme "Take care of the hat that takes care of your head." This publicity takes the form of posters, one of which features this theme and the second calling attention to the fact that in many instances a new lining may make an old hat as good as new. We also have pamphlets for distribution warning against abuse of the protective hat.



So we see that the Public Utility Safety Engineer may encounter difficulty or delays in obtaining his safety equipment and we offer the following four suggestions:

1. That he order his equipment as far in advance of his actual needs as possible.
2. That he apply to those orders the highest available priorities.
3. That he accept the changes in design which manufacturers must make with the assurance that they will perform satisfactorily if not for so long a period.
4. That he take the best possible care of his present equipment.

FOR ALL LOADS

from traces to the heaviest!

• Lavino Activated Oxide is made *specifically* for maximum sulphur removal . . . is not just a "satisfactory" purifying medium merely by virtue of incidental properties, but is *made especially for maximum capacity and activity, maximum trace removal and shock resistance.*

As such, we do not believe you will find Lavino Activated Oxide has any close rival —comparing cost, comparing performance and comparing savings.

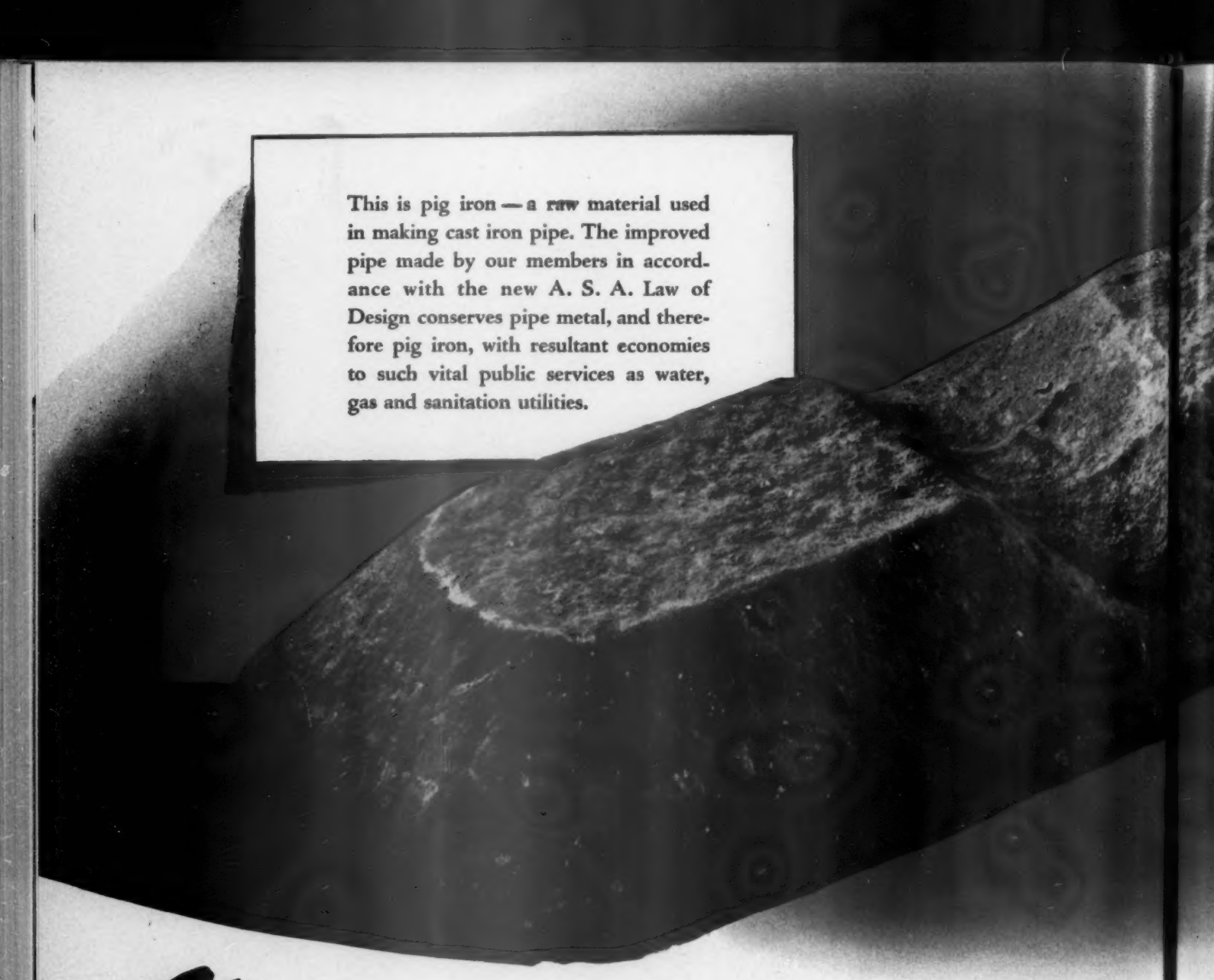
We'll be glad to tell you all about its remarkable record; just write a note on your letterhead to

Lavino Activated Oxide is made in the U. S. . . . is disinfected against fungi by a special, patented Lavino process.

LAVINO "ACTIVATED" OXIDES

GREATER CAPACITY . . . GREATER ACTIVITY . . . LESS OXIDE REMOVES MORE H_2S!

E. J. LAVINO AND COMPANY
1528 WALNUT ST., PHILADELPHIA, PA.

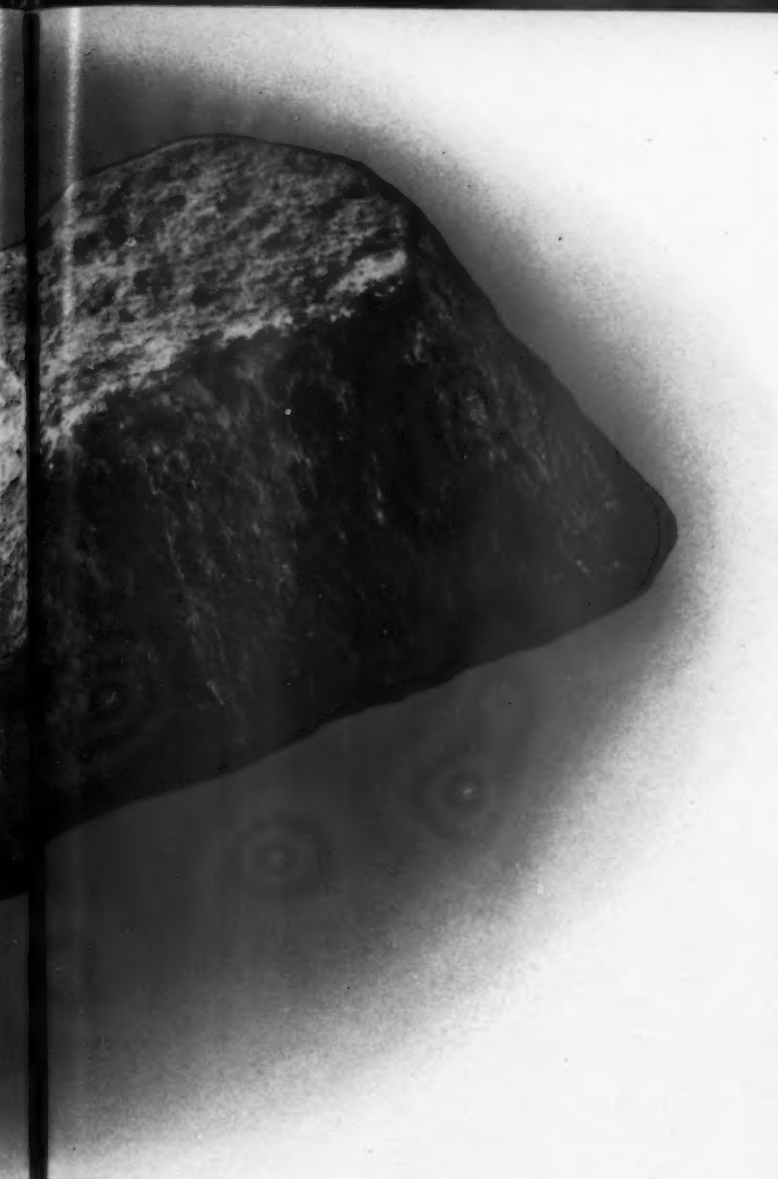


This is pig iron — a raw material used in making cast iron pipe. The improved pipe made by our members in accordance with the new A. S. A. Law of Design conserves pipe metal, and therefore pig iron, with resultant economies to such vital public services as water, gas and sanitation utilities.

Now CAST IRON PIPE BECOMES EVEN *more* ECONOMICAL

Yes, cast iron pipe, by far the lowest in cost per service year of all pipe materials used for underground mains, is now more economical than ever.

In January we announced that our members were making pipe in accordance with the recently adopted A.S.A. LAW OF DESIGN for cast iron pipe in underground service. And that this new Law of Design was the result of our cooperative study with consulting engineers and pipe users under the auspices



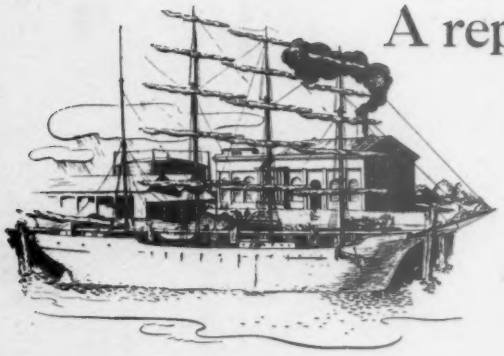
of the American Standards Association.

This new A. S. A. Law of Design means that the weights and thicknesses of cast iron pipe are *scientifically designed for specific laying conditions.* No more risk of under-guessing. No more over-guessing to be safe. You get the proper thickness for the service required.

Our members will of course continue to manufacture cast iron pipe in accordance with previously established specifications—A.W.W. A.—A. G. A.—Federal Government W W—P—421. But it will be obvious that the new factors in cast iron pipe design can save thousands of tons of metal with resultant large economies to pipe users.

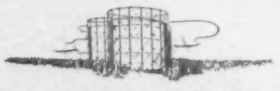
Thus, cast iron pipe keeps in step with American Industry's swift wartime progress in design and production. Known for *longest life* by official records—proved to be *lowest in maintenance cost* by a nation-wide survey—*salvaged or re-used* by hundreds of cities—it is now scientifically designed for specific laying conditions. And it is more economical than ever. Cast Iron Pipe Research Association, Thomas F. Wolfe, Engineer, Peoples Gas Bldg., Chicago.

CAST IRON PIPE
RESEARCH ASSOCIATION, CHICAGO
NO. 1 TAX SAVER



A report on your Gas Company's 84th year of service

Much has happened since the Territorial Assembly authorized the establishment of our gas business in January, 1859: Oregon became a state. Lincoln was elected President. The Civil War was fought . . . the Spanish-American War . . . then World War I. Portland Gas & Coke Company weathered all these events—continued to expand and improve its service, in good times and bad. Then in 1942, World War II was in full swing—challenging the Company with new problems and new responsibilities. But—as in the past—Portland Gas & Coke Company has met this challenge with new and greater achievements. Some of these are summarized in this report to our customers.



More Gas to More Customers

Portland gas production in 1942 passed all previous records. The send-out for the year was 5,763,761,000 cubic feet—29% more than the previous peak year of 1941. Much of this increased volume went to war industries to help them build vitally needed equipment for our armed forces. But a rapidly growing population accounted for a substantial part of this increase. Last year 6,962 new gas users were added to our lines—as much as a whole new city of 20,000 population. The total number of customers served by Portland Gas & Coke Company at the end of 1942 was 96,548—another new record.

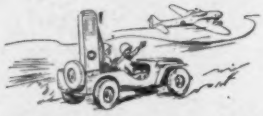
Briquet Production Greatest Ever

Because of the fuel shortage caused by the war, the demand for Gasco Briquets was greater last year than ever before in the company's history. Production in 1942 totaled 91,500 tons—58% more than in 1941. But this production figure doesn't tell the whole story. The greater part of these briquets went to meet local heating needs. This tremendously increased the amount of sacking and house-to-house delivering necessary. But by careful planning, scientific routing and hard work, our crews kept deliveries right on schedule. Because of the splendid job our entire briquet organization has done, more than 25,000 homes in this area have had their fuel problems economically solved. Gasco Briquets still are sold at the same low price in effect for the past four winters.

Roll of Honor

Sixty-four members of the Portland Gas & Coke Company organization are now serving in the armed forces of the United States. Their names are listed on the Honor Roll below. And here at home, 10% of the Company's payroll is going into War Bonds every month to back them up.

Clarence Walter Anderson	Marvin L. Folkharts	S. A. MacDonald	Neil M. Rilette
Blair Babcock	Virgil Gellatly	Cecil Malcolm MacGregor	Shelby Rhinier
Lawrence William Bellmer	Lloyd Leslie Goheen	Henry Howell McClain	Jack Hughston Roach
Frank J Bosvelt	James Harold Grant	Francis W. Mason	Marvin Lee Rogers
Irwin N. Brokenshire	Harvey G. Hanson	John D. Medak	Elmo Rush
James Thomas Burke	Albert Hoeft	George L. Moore	John Gregory Schin
James Edward Butler	Harold D Hongen	Wilfred Moorman	William Bertram Singer
Sydney E. Caldwell	Roger L. Johnson	Raymond F Nelson	Luther Spraher
Lloyd Claggett	Webster A. Jones	Otto A. Olson	Donald H. Trinkhen
Howard C. Cofer	Vincent Richard Klinefelter	Ray Otto Olson	John Seymour Tyler
Patrick O. Connor	Leon Francis Kreidl	Kenneth J. Opitz	Floyd Russell Vaskini
Glen Alvin Duke	Sudo Henry Laine	Ransom Dale Powell	Raymond Vogue
Chester F Davis	Paul Lunderfield	Charles Frederick Pride	Eugene Weber
Clement Day	Jack K. Larkin	Gerald E. Reeves	Holt Wilson Webster
John Patrick Dorigan	Frank Leary	Walter E. Reeves	Wayne E. Weddle
	George S. Little	Claud Ricketts	M. Weinbaum
			John J. Winn, Jr.



Gasco Motor Fuel...Gone to War, Too!

Portland Gas & Coke Company's benzol—*along with quantities of other important chemical by-products*—has also enlisted in Uncle Sam's services. You knew benzol, blended with gasoline, as *Gasco Motor Fuel*. Now benzol is used in 100-octane gasoline to give our air forces a more powerful aviation fuel than any being used by the Axis. Benzol is also employed in the manufacture of synthetic rubber and other essential war products. But when benzol's war job is done, you'll find it back in its former civilian role, ready to give you top performance in your post-war car (or plane)!

Heat Conservation...A War Necessity

The manpower shortage, the staggering burdens being carried by our transportation systems, the immense fuel consumption of our war industries, the increasing population in this territory—all have combined to make fuel conservation an essential part of the war effort. For this reason, saving heat in every way possible was a responsibility for the duration that every man, woman and child assumed cheerfully in 1942. Everywhere are evidences that a real fuel and heat saving job is being done, but in the event that extremely cold weather should create an excessive demand for gas, the War Production Board has directed us to ask all residential customers and many businesses and industries to curtail temporarily their use of gas until the emergency is over. You will be notified promptly by newspaper and radio if and when such necessity arises.

Your Cooperation Means Much

In addition to supplying gas service to our 96,548 customers, we have the urgent job of producing a wide range of chemical products which are going directly into war uses. For this reason, we are particularly grateful for the splendid spirit of cooperation with which you have accepted necessary war-time changes. We appreciate your business, and—as in peace time—we are making every effort to give you the best public service possible. But the need for conserving tires and equipment—the scarcity of materials—the loss of men to the armed forces—together with other factors—make it difficult for us to carry on our business entirely as in the past. Service calls, for example, have to be routed in advance to minimize mileage—this means we cannot answer them quite so promptly as in the past. We are asking you on occasion to read your own meter. We may even have to ask your assistance on other matters. *But whatever inconveniences we may have to ask you to share with us in 1943—whatever changes in production or policy may be necessary—these will come about only in aid of the common purpose of helping win the war as quickly as possible.*

GAS IS WAR MATERIAL *Use it wisely!*

PORTLAND GAS & COKE COMPANY

This 84th anniversary message presented as full page newspaper copy from Portland (Ore.) Gas & Coke Company to its 96,548 customers was devoted largely to the story of how the company's activities have been influenced by the first year of the war . . . how new demands have been met . . . how the public has cooperated.

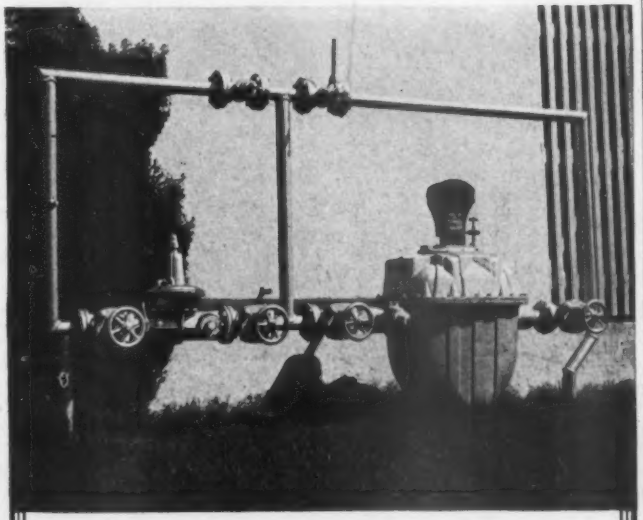
In time of peace the same advertisement might have reminisced on how gas used to be made from coal brought in sailing ships from Australia. It might have recalled how in 1912 there was placed in operation an oil-gas and by-product chemical plant which was destined to become a leader in the industry.

More might have been told about Portland's growth from a gas-lighted territorial village of less than 3000 population, to a booming war production center of nearly half a million persons, where gas is put to every conceivable domestic, commercial and industrial use.

There's a story, too, in how more than 2300 miles of gas mains have been constructed to serve a total of 81 communities.

REYNOLDS *gas* REGULATORS

INSURE HEAT TREATING ACCURACY BY ACCURATE GAS CONTROL



In the above installation the Reynolds Regulator reduces the inlet pressure of 25 pounds to five pounds.

REYNOLDS builds a Regulator for every type of Gas Control Installation. Proved by records of performance in actual operation or by records of factory tests on new developments, every REYNOLDS unit—whether for high pressure or low—is a proved product.

Long life, efficient operation, accurate regulation, reasonable cost, low upkeep—these are vitally important inherent features built into REYNOLDS Gas Regulators through more than 50 years of experience in developing, designing, building and testing Gas Control equipment.

For full cooperation of our Engineering Department, write our Factory, Branch Offices, or Representatives.

Representatives

Eastern Appliance Co.
Boston, Massachusetts

Wm. A. Ehlers
No. 268 Park Street
Upper Montclair, N. J.

Branch Offices

423 Dwight Building
Kansas City, Missouri

2nd Unit:
Santa Fe Building
Dallas, Texas

REYNOLDS GAS REGULATOR CO.

Anderson, Indiana, U. S. A.

GAS CONTROL SINCE 1892

KEEP EVERY TOOL IN THERE *Fighting*

Prompt Factory Reconditioning

RIDGID Wrench Jaws

- ★ No Priorities Needed
- ★ Thru Your Supply House
- ★ Big Savings To You
- ★ New Parts Guarantee

Your RIDGID wrench jaws Factory Reconditioned 1/2 PRICE OF NEW PARTS Plus small shipping charge

RIDGID Wrench Hookjaw

RIDGID Wrench Heeljaw with pin

THIS IS NO TIME for tools to lie around waiting for repairs — like every gun, every tool is needed.... Collect all your old worn RIDGID Wrench Jaws *now*, turn them over to your Supply House and order Factory Reconditioning. Service is prompt—*you don't need priorities!* Parts you send are carefully inspected to make sure they are worth reconditioning—we reserve the right to reject them if they can't be made good as new. Remember: *only* RIDGID *trademarked parts accepted for this service.*

Both hook and heel jaws are scientifically annealed in our automatic electric furnaces, same as new jaws. They are recut in the same machines and by exactly the same methods as used for new jaws. Jaws are then re-hardened like new. After final inspection, they are returned to you under regular RIDGID new parts guarantee of satisfaction.

This service is available only in the United States.... Act now!

THE RIDGE TOOL COMPANY, ELYRIA, OHIO

RIDGID

Pipe Wrenches, Cutters, Threaders, Vises

Fast-Working Tools for War.. and the Busy Peace Ahead

RECENT COURT DECISIONS
Affecting Gas Utilities

New Laws Affect Sales' Validity

By
Leo T. Parker
Attorney at Law
Cincinnati, Ohio

DURING the past few months new laws, regulations and abnormal conditions have importantly changed, or rendered void, many of the ordinary laws applicable to contract rights. Therefore, in this article we shall briefly review the higher court cases involving these and other sale controversies especially interesting to our readers.

First, we shall consider a clause commonly in modern contracts. This clause relates to the rights of purchasers to cancel contract obligations.

For example, in Fort Wayne Company v. Anchor v. Anchor Corporation, 130 F. (2d) 471, reported November, 1942, it was shown that a purchaser contracted to purchase certain merchandise. The contract specified that the fulfillment of the contract would depend upon the purchaser's "requirements."

Before the merchandise was accepted by the purchaser it closed its plant temporarily, and the seller was left with the specially manufactured merchandise on its hands. The latter filed suit on the contract, but the higher court held the purchaser not liable. This court explained that from a legal standpoint, the purchaser had no "requirements" due to the closing of its plant. This law is effective whether the plant is closed permanently or temporarily.

Contract Automatically Cancelled

Modern higher courts hold that a seller is not obligated to deliver merchandise to a purchaser where, after the contract was made, the Federal Government establishes a "ceiling" price. Moreover, the prior agreement to arbitrate does not affect this new law.

For example, in the late and leading case of Kremer, 43 N.E. (2d) 493, a contract for purchase of special merchandise between a buyer and seller clearly stipulated that any controversy arising under or in relation to this contract shall be settled by arbitration.

The seller contended that the establishment of a "ceiling" price invalidated the contract and that he was not required to make delivery at a price lower than the contract price. However, the purchaser contended that this was a matter of arbitration. It is interesting to observe that the higher court refused to permit arbitration, and held that the contract *need not be performed by the seller* since the contract was automatically cancelled by the "ceiling" price order which was considerably less than the price the purchaser had agreed to pay for the merchandise.

Law of Priorities

Obviously, war priorities, allocations, etc., have had a very important legal effect on otherwise valid and enforceable contracts.

It is important to know that the higher courts will not always excuse a seller who fails to complete a valid contract of sale on the excuse that the purchaser, who enters complaint, has no senior priority rating.

For example, in James Pels Company v. Republic Corporation, 31 N.Y.S. (2d) 857, it was shown that a buyer and a seller entered into a contract of sale by the terms of which the seller agreed to supply the purchaser with a stipulated quantity of merchandise to be ordered by the purchaser on certain dates at agreed price. When the times or dates for delivery arrived the seller did not fill the orders. Upon complaint registered by the purchaser the seller explained the reason for non-delivery was that the purchaser had no senior priority rating and that orders for merchandise had been received from purchasers who had priority rating and that, since his stock was low, after such orders were filled no merchandise was in stock to fill orders or contracts previously made with purchasers who had no such priority ratings.

However, it is interesting to observe that this higher court laid down modern law to the effect that the excuse that all such merchandise owned, held, or controlled by the seller, or obtainable from the usual sources of supply had been allocated to orders entitled to preference for national defense purposes, and that no surplus was available, *was insufficient* to relieve the seller from damages.

In other words, a seller cannot avoid liability for failure to complete a contract of sale by merely explaining that its stock was taken by firms who demanded immediate delivery and who had superior priority ratings. In order that a seller may avoid liability for failure to complete and fulfill a contract with a firm who does *not* hold a priority rating he must prove that he faithfully and honestly endeavored to obtain the merchandise from sources, *other than his usual sources* and that he could not obtain the merchandise.

Another recent court held that notwithstanding unusual war conditions a seller must complete a contract if he can do so without violating valid laws or regulations.

For illustration, in Globe Company v. Manufacturers Chemical Company, 31 N.Y.S. (2d) 691, reported January, 1942, it was shown that a seller agreed to supply a purchaser with a stipulated quantity of stearic acid at an agreed price. However, the seller failed to complete the contract because it appeared that stearic acid was not at this time readily

available. The purchaser went into the open market and purchased a substitute, although later testimony proved that stearic acid was available. The purchaser sued the seller for damages amounting to his actual and provable loss which resulted from use of the substitute. The higher court held the purchaser entitled to a recovery *only* of the difference between the contract price and the actual price of the acid when the purchaser purchased the substitute. Therefore, according to this late case it is apparent that before a purchaser may go into the market and purchase a substitute for the contracted merchandise, and subsequently expect the seller to stand the resultant losses, such purchaser must be certain that no merchandise of the character specified in the contract is available.

Review of Tax Cases

Recently the higher courts rendered several important decisions on taxation. We shall review these cases.

First, it is well known that considerable discussion has existed from time to time whether salesmen are within the scope of workmen's compensation, unemployment compensation, and social security laws.

It is important to know that modern higher courts hold that when deciding this question it is unnecessary to determine whether the common law relation of master and servant exists because employes are brought within the purview of the compensation laws by laws more inclusive than that of master and servant.

For example, in Sound Cities Gas Company v. Ryan, 125 Pac. (2d) 246, it was shown that certain salesmen were employed by a gas company to sell its capital stock. Each salesman operates entirely on his own capital. He is told that there is only one rule and that is to tell the truth and follow the prospectus of the company, and that the stock is a speculation and not an investment. There is no definite period of employment and the relationship may be terminated at any time. No requirement of any particular volume of sales is made in order for the salesman to remain as an agent of the company, or that the salesman shall devote all or any portion of his time to the business of selling stock. The salesman is paid strictly on a commission basis of twenty per cent of the money actually received by the gas corporation from his sales of the company's stock. He has no drawing account and must pay all of his own expenses.

The important question presented the court was whether the company must pay State Workmen's Compensation Insurance on these salesmen. The court held in the affirmative, and said:

"The sole question is whether the salesmen were employes, within the meaning of our unemployment compensation act. . . . It is clearly apparent that the salesmen performed services for remuneration and came within the provisions of the act. . . . We conclude that the commissions collected by the salesmen who sold stock were subject to the unemployment compensation tax."

Gas Subject To Sales Tax

It is well established law that as long as gas, or other merchandise imported remains in the hands of the importer in the *original* and *unbroken package* in which it was imported, it is protected by the Commerce Clause of the Constitution, from interference of state laws. Therefore, it is only when the original package has been sold by the importer or has been broken by him, or has otherwise become mixed with the common mass of property in the State, that it becomes subject to state legislation. This rule of law is applicable in determining whether gas is subject to a state's sales tax.

For illustration, in Mississippi River Fuel Corporation v. Smith, 164 S.W. (2d) 370, a Gas Company was a Delaware corporation, authorized to do business in Missouri. It operates a 22 inch pipe line from Louisiana, through Arkansas and into Missouri.

In regard to that phase of the Gas Company's operation in distribution and sale of gas to industrial consumers located on the main transmission line in Missouri, each delivery is affected by a small lateral line taking off from the main transmission line. Within a few feet of the transmission line, regulators are placed upon the lateral line to control the passage of gas into said lateral line. These regulators effect a substantial reduction in pressure from the main transmission line to the lateral line and permit only that amount of gas to pass into the lateral line as is necessary to make available an adequate supply of gas for industrial use.

It is interesting to observe that the higher court held the gas used in Missouri subject to "sales" tax in Missouri. The court explained that under the old "broken package rule," which subjects articles imported in interstate commerce in original package to state taxation, when the importer sells or breaks the package, such sales to industrial users of natural gas, transported in interstate commerce by a pipe line into Missouri, were subject to sales tax where the pressure was reduced before the gas reaches the branch lines or Missouri users, and the gas in the branch lines was *not returnable* to the main line.

Watchman Is Interstate Worker

With respect to employes and wages, considerable discussion has arisen regarding the legal status of an ordinary watchman employed by a gas corporation. It has been contended by many that a watchman is not an interstate employe, because his work is confined strictly to intrastate duties. However, modern courts refuse to uphold this contention.

For example, in S. H. Company, Inc. v. LaRue, 156 S.W. (2d) 432, it was disclosed that a man named LaRue was employed by a company from January, 1940, to September 14, 1940. His duty being to watch the plant during the night hours, and also guard motor trucks as they were unloaded.

LaRue filed suit against the company to recover back wages, penalty and attorney fees on the ground that the company had not paid him as an interstate emplove on the wage basis specified in the Fair Labor Standards Act of 1930.

It is interesting to observe that the higher court held the watchman entitled to a recovery.

Modern Monopoly Laws

During the past few months the monopoly laws have been considerably varied and changed. This is important law for all readers.

Modern higher courts hold that the true test of the legality, under the Sherman Anti-Trust Act, of an agreement or regulation restraining trade is whether the restraint is such as merely regulates and perhaps thereby *promotes* competition or whether it is such as may suppress or destroy competition. If the acts or agreement tends to suppress or destroy competition the Sherman Anti-Trust Act is violated.

Obviously, an agreement or regulation to be in restraint of trade and within the Sherman Anti-Trust Act must have some *direct* and immediate effect upon interstate commerce. This is so because both the Sherman and Clayton Acts are United States laws.

It has been held by recent courts that where a manufacturer or seller deals in patented products the patent

license agreement may contain a condition that the licensee must observe the same sale prices as the patent owner who grants the license and that this agreement is not illegal. See MacGregor, 130 F.R. (2d) 870.

Another important point is that the Clayton Act recently was amended thereby making it unlawful to "discriminate in price between different purchasers."

It is important to know that a modern higher court held this amendment relates *exclusively* to actual purchasers, and not to others who presently desire to purchase the product.

This court explained that the term purchaser, as used in the amendment means simply one who purchases as a buyer or vendee, but not one who *seeks* to purchase or goes into the market for the purpose of purchasing, or a prospective purchaser.

Percentage of Interstate Business Not Important

According to decisions rendered by recent higher courts where a corporation operates at least one branch of his business *exclusively* in interstate commerce, he must pay *all* employes the wages specified in the Fair Labor Standards Act. And this is so although only a small percentage of the employer's business relates to interstate commerce.

It is important to know that late higher courts have held that the term "commerce," as used in this Federal Wage law is defined to mean "trade, commerce, transportation, transmission or communication among the several States or from any State to any place outside thereof." The law further provides that "an employe shall be deemed to have been engaged in the production of goods if such employe was employed in producing, manufacturing, mining, handling, transporting, or in any other manner working on such goods, or in any process or occupation necessary to the production thereof, in any State."

For example, in Niehaus v. Joseph Greenspon's Corporation, 164 S.W. (2d) 180, reported October, 1942, it was disclosed that a night watchman sued a corporation to recover an unpaid balance allegedly due him, after deducting the compensation actually paid him, from the total amount he was entitled to receive at the Federal statutory minimum wage of 25 cents an hour with time and a half for the hours employed in excess of 44 hours a week. He alleged that his employer owed him, as this difference, the amount of $365, as based upon the Federal law known as the Fair Labor Standards Act.

During the trial the night watchman proved that his employer was engaged in a manufacturing business and that 25% of his products were shipped in interstate commerce. In holding in favor of the employe, the court said:

"Under the facts of the present case, the plaintiff was 'engaged in commerce or in the production of goods for commerce' within the scope and application of the act."

W. C. Grant Active in Dallas Noise Abatement

Dallas is doing things about the noise nuisance. William C. Grant, chairman of the Dallas Committee for Noise Abatement, and Advertising Director of the Lone Star Gas Company, has set up a central bureau where citizens may register complaints against objectionable noises and obtain help in getting the nuisances corrected. Mr. Grant, as volunteer head of the bureau, assists in efforts to do away with harmful noise on an amicable basis but if cooperation is not obtained, the cases are turned over to the police for enforcement under the city's anti-noise ordinance. . . . The National Noise Abatement Achievement Award Competition for 1943 is now getting under way in major cities throughout the nation.

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Tentative Program
Distribution Conference

The Program Committee for the Distribution Conference of the Technical Section to be held April 29 and 30 at the Hotel Netherland-Plaza, Cincinnati, Ohio, met in New York February 15th. Present were H. B. Andersen; A. C. Cherry; H. L. Gaidry; W. T. Collins; Linn Edsall; R. F. Hadley; T. H. Kendall; S. P. Cobb; F. A. Engel; C. S. Goldsmith; A. V. Smith; A. Gordon King.

It was decided in the interest of conserving the time of delegates to the Conference that the procedure, initiated by the Technical Section and successfully demonstrated during its last year's meetings, of streamlining the program to two days instead of the customary three days should again be followed.

The program will open on Thursday morning, April 29th at 10:00 A.M. with an address by the Chairman of the Distribution Committee, H. Bruce Andersen of Philadelphia, to be followed by addresses of welcome by a representative of the Cincinnati Gas & Electric Company who, it is hoped, will introduce the Mayor of Cincinnati. Next, will come brief addresses by the President of the Association, Arthur F. Bridge, of Los Angeles, California and Managing Director Major Alexander Forward.

The first technical paper will be on "Catholic Protection Interference," to be presented by A. V. Smith of Philadelphia and this will be followed by a paper on "Women in Distribution Work." Both papers will be open for discussion.

Immediately following the morning sessions will come the first of the round-table luncheon conferences, two of which will be held at 12:30 on Thursday and two at 12:30 on Friday. Number 1 luncheon on Thursday morning will be under the sponsorship of R. F. Hadley and will deal with Pipe Coatings and Corrosion. Luncheon Number 2 will be under the chairmanship of W. T. Collins for discussion of Work on Customers' Premises, to include women in the gas industry and the training of employees.

On Friday and starting at 9:30 A.M. there will be a panel discussion covering emergency problems among which will be included servicing under present conditions, to be presented by David Edwards of Columbus, Ohio, discussion on personnel and the use of substitute materials.

The panel discussion will be followed by a paper on "Teaching Customers to do Things for Themselves as an Aid to the War Effort" and the next and final paper will be a contribution of the Technical Section's Committee on Operation of Public Utility Motor Vehicles, the tentative title of which is "Motor Vehicles Operation at the Present Time." Both papers will be open for discussion.

The Friday morning session will conclude with the showing of an interesting, informative and striking film ("talkie," now in course of preparation) illustrating present pipe line construction.

The Friday afternoon round-table luncheon conferences will be under the sponsorship of Chairmen J. F. Collins of New Orleans and T. H. Kendall of Pittsburgh. Luncheon No. 1 will deal with Meters and Metering and the Government orders affecting tin and meter use. At Luncheon No. 2, Chairman Kendall presiding, "Construction and Maintenance," servicing questions and reconditioning and reclaiming pipe lines are scheduled for discussion.

GAS PLANT EQUIPMENT
UGI REFINERY GAS REFORMING PROCESS
UGI NATURAL GAS REFORMING PROCESS
UGI HEAVY OIL PROCESS
GAS DISTRIBUTION
PIPE LINE CONSTRUCTION
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War Production Board and Other Administration Orders

Office of War Utilities

Order U–1 Replaces Order P–46

The Office of War Utilities, recently created within the War Production Board to administer war activities of electric, gas, water, steam and communications utilities, issued its first basic order Feb. 24th, governing the flow of materials into the entire utilities field with the exception of communications.

The order, U-1, replaces the former order P-46 and is the first industry order to be integrated with the new controlled materials plan.

An important group of provisions, designed to effect sharing of material and equipment in utility inventories, requires utilities to sell surplus stocks as a condition for continuing to receive priorities assistance. These provisions are linked with the creation of regional surplus stock offices, to be in operation throughout the United States next month, through which utilities will carry on the redistribution of their surplus materials and equipment.

The order also authorizes the use of a higher rating, AA-1, and a controlled materials plan allotment symbol, to permit utilities to obtain materials for maintenance, repair and minor construction. The order also, for the first time, brings under inventory regulation stocks of controlled material held by utilities for construction. Utilities are required to limit such holdings to their needs for sixty days.

The order sharply reduces the inventory which may be held for maintenance and repair after March 31.

Limitation Order L–252 Valves and Valve Parts

Part 3176—

The fulfillment of requirements for the defense of the United States has created a shortage of steel, copper, and other critical materials used in the manufacture of valves and valve parts, for defense, for private account, and for export; and the following order is deemed necessary and appropriate in the public interest and to promote the national defense:

Limitations. Except as specifically authorized by the Director General for Operations, no producer shall after May 1, 1943, put into process or cause to be put into process, any material to be incorporated into valves or value parts, except for the manufacture of valves and valve parts which conform to the specifications contained in the Appendix attached to and a part of this order, or for the manufacture of:

(1) Valves

(i) The bodies or bonnets of which were cast before May 1, 1943;

(ii) Ordered for use as part of the equipment of aircraft or watercraft other than pleasure craft; or

(iii) For the conduction of liquid or gas having chemical or physical properties which render the use of valves described in the Appendix dangerous or impractical; and

(2) Valve parts for repair of valves which are completed on May 1, 1943, or which are produced thereafter in accordance with the provisions of paragraph (b) (1) of this order.

(c) *Restricted deliveries.* Except as specifically authorized by the Director General for Operations:

(1) No producer shall sell or make delivery of any valves or valve parts manufactured in violation of the terms of this order, and

(2) No person shall knowingly purchase or accept delivery of any valve or valve part produced in violation of this order.

(d) *Order superseded.* The provisions of this order supersede the provisions of Schedule No. 1 of Limitation Order L-42.

(e) *Applicability of priorities regulations.* This order and all transactions affected thereby are subject to the provisions of all applicable priorities regulations.

(f) *Records.* Each producer shall retain in his files for a period of two years records showing his inventory and production of all valves, including those for the manufacture of which material was put into process subsequent to May 1, 1943. These records shall be kept readily available and open to inspection by duly authorized representatives of the War Production Board.

(g) *Appeals.* Any appeal from the provisions of this order shall be made by filing a letter in triplicate referring to the particular provision appealed from and stating fully the grounds of the appeal.

(h) *Violations.* Any person who wilfully violates any provision of this order or who, in connection with this order, wulfully conceals a material fact or furnishes false information to any department or agency of the United States, is guilty of a crime, and upon conviction, may be punished by fine or imprisonment or both. In addition any such person may be prohibited from making or obtaining further deliveries of, or from processing or using, material under priority control, and may be deprived of priorities assistance.

(i) *Communications.* All reports required to be filed hereunder and all communications concerning this order shall, unless otherwise directed, be addressed to: Shipbuilding Division, War Production Board, Washington, D. C., Ref.: L-252.

Issued this 23rd day of January 1943.

Appendix

Specifications for Valves and Valve Parts

The following specifications govern the manufacture of valves and valve parts. These specifications do not purport to contain any recommendations regarding the most efficient or safe use of any valve or valve parts covered herein.

Certain of the terms used in this appendix (including the terms valves and valve parts) are defined in the body of this order, L-252. In addition, certain exceptions are made, and certain obligations imposed upon producers and others. You should, therefore, be thoroughly familiar with the body of the order before reading this appendix.

The appendix is divided into three parts. Part 1 covers iron gate, globe, angle, cross and check valves and valve parts. Part 2 covers brass or bronze gate, globe, angle, cross and check valves and parts. Part 3 covers steel gate, globe, angle, cross and check valves and valve parts. The order is too long to be included in this issue of the Journal. The order is so important we suggest that every utility company write the War Production Board, Washington, D. C., or call at your nearest WPB office, for a copy.—Editor.

Office of Price Administration

Petroleum Administration For War

Petroleum Administrator for War Harold L. Ickes on Feb. 10th, issued Petroleum Regulation No. 1, which provides a means by which directions may be issued governing the delivery or receipt of petroleum and its products.

The Regulation merely implements the authority already conferred upon the Petroleum Administrator by Executive Order 9276. It is designed to avoid the necessity for the issuance of formal orders in the rare individual cases where it will be necessary to direct immediate action to further the war petroleum supply program or to meet local emergencies which may arise from time to time.

Specific directions which may be issued pursuant to the Regulation will override the provisions of any contract to which the person addressed is a party. Such specific directions will also override any general Petroleum Regulation, Petroleum Administrative Order, Petroleum Distribution Order or Directive of the Petroleum Administrator.

In commenting on the new Regulation, Deputy Administrator Ralph K. Davies said:

"This Regulation is necessary to achieve the maximum flexibility in the war time coordination of petroleum supply and demand.

"We must face the probability that an increased pace of military operations will result in many sudden shifts of supply and demand that will require fast action. We must have the power to move swiftly in individual cases to meet sudden specific problems.

"In meeting these emergency problems, there are bound to be cases where contractual obligations will stand in the way of compliance with necessary directions of this Office.

"One of the basic reasons for the Regulation, therefore, is to confer the legal immunity of the Second War Powers Act on the particular persons affected, with respect to liabilities under such obligations which otherwise would result from complying with such directions.

"The Regulation will, in this respect, make possible continued Government-Industry cooperation in carrying out quickly and effectively the policies and programs necessary to assure a maximum supply of petroleum products for military and essential civilian use."

RPS 29—By-Product Coke

Consumers of by-product foundry, by-product blast furnace and beehive furnace coke will pay transportation tax of 4 cents per net ton imposed by the revenue act of 1942, OPA ruled Jan. 28th. The ruling, contained in appropriate amendments, is retroactive to December 1, 1942, the effective date of the tax.

The OPA action is contained in amendment 2 to revised price schedule 29—by-product foundry and by-product furnace coke—and amendment 3 to revised price schedule 77—beehive oven furnace coke produced in Pennsylvania. In addition, amendment 1 to supplementary order 31, which covers the application of the tax on the transportation of property, is issued simultaneously to exclude schedules 29 and 77 from its provisions.

Under the terms of the amendments the transportation tax paid on the coal used in the manufacture of

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REED'S 4 WHEEL Razor Blade Pipe Cutters

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The REED FOUR WHEEL Cutter operates with a short back and forth motion through only one-third of a circle. Each of the four wheels exerts the same pressure on the pipe, and all 4 therefore cut evenly and completely through the pipe at the same time.

Equipped with Reed special alloy RAZOR BLADE Wheels, which cut with remarkable ease, leave little burr, and have a long life of useful service.

A sample cutter for test and trial may be ordered on memorandum invoice, to be paid for if retained or returned for credit if unsatisfactory. Try it once, and you will use no other.

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the coke, not in any event to exceed 4 cents per net ton of coke, may be passed on to the ultimate consumer, but in billing the tax must be stated separately from the price the consumer pays for the coke and may not be included in the computation of the maximum prices.

Non-Essential Driving

O.P.A. makes it clear that in absence of adequate alternative means of transportation, car owners may drive to meetings directly related to their jobs but only if attendance is essential to, or part of their occupation or profession; * * * and to meetings conducted to train personnel for emergency and make other preparations for emergencies involving a threat to life, health or property; * * * (Amendment 15 to Ration Order 5CL), effective January 26. *O.P.A.-1532.*

Office of War Information

Utility Rates

An increase in utility rates, even though made as the result of automatic adjustment clauses based on increased taxes, fuel costs and similar items, cannot be made without prior notice to the Office of Price Administration, OPA ruled today.

In a formal interpretation, OPA held that such rate increases come within the provisions of the Emergency Price Control Act as amended and OPA Procedural Regulation No. 11 even though the automatic adjustment provision in the utility company's contract may have been made before the Price Control Acts were enacted.

The act provides that no public utility shall make any general increase in its rate or charges which were in effect September 15, 1942, unless it first gives 30 days notice to the President or such agency as he may designate. The Office of Price Administration has been designated as that agency by the Director of Economic Stabilization. The utility must also consent in these cases to the intervention by OPA before the regulatory agency having jurisdiction over the rates.

Selective Service System

National Headquarters

Washington, D. C.

Occupational Bulletin No. 9 (Amended January 19, 1943)

Effective: Immediately

Subject: Heating, Power, Water Supply, and Illuminating Services

1. The War Manpower Commission has certified that heating, power, water supply, and illuminating services are activities essential to the support of the war effort.

2. This bulletin covers the following essential activities which are considered as included within the list attached to Local Board Release No. 115, as amended:

(a) Heating, power, water supply and illuminating services: Electric light and power, water supply and gas utilities; steam-heating companies.

3. The following list of occupations in heating, power, water supply, and illuminating services are occupations requiring a reasonable degree of training, qualification, or skill to perform the duties involved. It is the purpose of this list to set forth the important occupations in heating, power, water supply, and illuminating services which must be filled by persons capable of performing the duties involved in order that the activities may be efficiently maintained. This list is confined to those occupations which require six months or more of training and preparation.

4. In classifying registrants employed in these activities, consideration should be given to the following:

(a) The training, qualification, or skill required for the proper discharge of the duties involved in his occupation;

(b) the training, qualification, or skill of the registrant to engage in his occupation; and

(c) the availability of persons with his qualifications or skill, or who can be trained to his qualification, to replace the registrant and the time in which such replacement can be made.

Lewis B. Hershey
Director

CRITICAL OCCUPATIONS

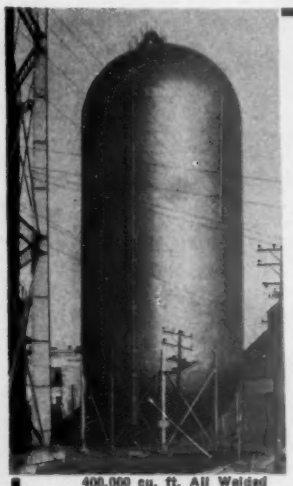
Heating, Power, Water Supply, and Illuminating Services

Accountant, Audit

(Included under this title are those persons who design and install accounting systems for the activity listed above who assume extensive responsibility for the examination and verification of accounting records and prepare comprehensive financial reports based thereon. It does not include persons who perform routine auditing duties under general supervision such as verifying, checking, etc.)

Armature Winder

(This title covers those persons who install, repair and wind coils to motors, generators and transformers in electric power systems.)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Auxiliary Equipment Operator (All Around)

(This title includes only those persons who actually control and adjust boiler and turbine, auxiliary equipment such as condensers, fans, pumps, and pulverizers. It does not include such occupations as oilers and wipers.)

Bacteriologist
Batteryman, Large Emergency Storage
Blacksmith, Maintenance
Boiler Operator
Boilermaker, Maintenance
Booster-Pump Operator
Bricklayer, Maintenance Refractory
By-Product Operator, Gas
Cable Splicer

(This title covers persons who install, repair and maintain overhead or underground power cables.)

Carpenter, Maintenance
Chemist
Chief Operator, Water Purification or Softening
Crane Operator
District Serviceman (Electric Power)
Draftsman, Engineering
Driller, Water Well
Electrical Tester
Electrician, System or Plant
Engineer, Professional & Technical

(This title covers persons who are actually engaged as engineers in the operating and research phases of the activity described above, regardless of educational background.)

Engineer, Turbine or Diesel
Foreman

(This title covers Foremen who are actually engaged in supervisory duties in connection with the activities described above and who exercise independent judgment and assume extensive responsibility for the services. It does not include laboring gang Foremen.
Gas Equipment and Control Man
Gas Maker

Heavy Mobile Equipment Operator (Maintenance and Construction)

(This title covers persons who operate and make minor repairs to one or more of the following types of equipment (ditching machines, hole diggers, pole raising devices, winches, etc.), for the activities specified above. It does not cover truck drivers or tractor drivers.)

Instructor, Training Program

(This title covers only those persons engaged in the occupations included in this list who, because of their skill and experience, are detailed as instructors in an established training program.)

Lead Burner
Lineman
Load Dispatcher, Power or Gas
Machinist, Maintenance
Manager, Employment and Personnel
Mechanic, Maintenance
Meter Repairman, Gas and Water
Patrolman, Transmission Line
Pipe Fitter, Maintenance
Purification Operator, Gas
Pusher Man
Radio Technician
Rigger, Construction
Rigger Supervisory, Underground Cable
Sheet-Metal Worker, Maintenance
Storekeeper, Chief

(This title includes those persons responsible for the operation of a store, department, or major subdivision. It does not include such persons as stock clerks, bin clerks, or stock-handlers.)

Substation Operator

Superintendent or Manager (Division, District, Plant and Department)

(This title covers those persons who are actively engaged in supervising directly, or through subordinates various technical or operating departments in the heating, power, water supply, and illuminating services. This title covers those assistants who are directly responsible to such managers on a division or district level for the efficient functioning of the technical or operating departments. It does not cover managers or their assistants who are concerned primarily with sales, promotional, legal, tax, clerical, insurance, rate structure, and other aspects of nontechnical or nonoperating activity.)

Switchboard Operator, Power
System Operator (Load Dispatcher)
Tree Trimming Supervisor (Overhead Power Lines)
Welder (All Around)
Inspector

(This title covers persons who are responsible for inspection duties involving standards of operating efficiency, safety, specifications on construction, etc., to insure the continued uninterrupted services specified in this list.)

Reduction in Pacific Gas and Electric Co. Rates

The California Railroad Commission, after several months of investigation and conferences with the company, has ordered a rate cut, effective February 15, that will save customers $1,450,000 per year on the basis of current usage. Most of the savings will go to residential and commercial customers and there will be smaller benefits for regular industrial customers and for those who use the fuel to heat commercial buildings.

As a result of the reduction, the Commission states, San Francisco will have the second lowest gas rate of any of the twenty-five major cities in the United States.

This is the second reduction in P. G. and E. natural gas rates within a year. It is made in the face of substantial increases in operating costs and taxes. Also it is in sharp contrast to the rise in the prices of other commodities.

Since the P. G. and E. first substituted natural gas for manufactured gas in 1929-1930 it has made seven major reductions in rates, giving customers annual savings totaling $18,972,000. Gas bills were reduced $8,139,800 per year in 1929-1930; $2,606,000 per year on May 1, 1936; $2,026,000 per year on April 1, 1938; $1,000,000 per year on August 1, 1939; $3,000,000 per year on October 22, 1940; $750,000 per year on May 15, 1942, and now $1,450,000 per year.

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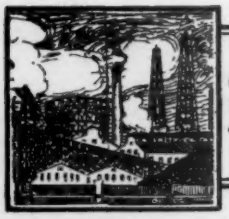

News of the Gas Industry

Institute of Gas Technology Increases Fellowship Stipend

The fellowship stipend for students of the Institute of Gas Technology in Chicago has been increased in recognition of the increased living costs of these abnormal times, it has been announced by Dr. Lincoln R. Thiesmeyer, educational director of the Institute.

The stipend now totals $1135 for the academic year of nine months instead of the usual $1000. The monthly allowance has been increased from $75 to $90 for this year and for the immediate future. In addition, the fellowship stipend includes $325 for tuition and fees.

The executive committee also decided that the summer expense allowance for fellows should be increased from $125 to $140 a month. This allowance is given during the fellows' three months of summer training in the gas industry, which is a required part of the Gas Institute's training program.

"The students do not consider this $140 per month as a salary to be compared with that commanded by excellent young technical men of their experience," explained Dr. Thiesmeyer, "because they recognize that the employing company is contributing invaluable training as well. The contribution of each employing company to the student-trainee is rather to cover his expenses in undertaking this phase of the course.

"In even accepting a fellowship for graduate study at this time, the student has sacrificed temporary financial gain in order to make himself of greater usefulness to the gas industry in the future."

The educational director also pointed out that it has been customary for the employing companies that help in this training program to cover traveling expenses (in excess of 500 miles) to the summer job and then to the Institute in September.

"In effecting these financial readjustments, the gas industry expresses again its confidence that a substantial investment in these promising young men will return high dividends when they become a permanent part of its operating personnel," said Dr. Thiesmeyer.

"Student fellows of the Gas Institute are topnotch men who have been awarded one of the best fellowships in the country. It is designed to cover completely their tuition, laboratory fees and modest living expenses. Unlike many scholarships and fellowships this is not granted in exchange for services rendered by the student in instructional or laboratory assisting. Except for the work he is now doing on research projects of military significance as a contribution to the war effort, each man devotes his entire time to scholastic pursuits in gas technology. He is preparing himself for still greater technological service to the nation at war and for leadership in an industry that promises undreamed-of expansion in the post-war era. And he is doing so unhampered by financial stress during this important period of training."

New Selectees

A two-point program to make maximum use of critical scientific manpower in the gas industry technical training program will go into effect immediately at the Institute of Gas Technology, according to an announcement by Harold Vagtborg, the Institute's director.

The program concerns the new selectees for fellowships at the Gas Instiute, which is located at and affiliated with Illinois Institute of Technology in Chicago.

These topnotch technical students are scheduled to begin their regular training program at the Gas Institute in June, but because so many colleges are operating under war-time accelerated programs, graduation dates of the new fellows vary considerably. At least two of the new Gas Institute appointees will complete their regular college training in March.

So provision is being made under the new program to make maximum use of these extra man hours. The new fellows will be assigned to Gas Institute war research projects as rapidly as they complete their college training and will work at this activity until their regular training program starts.

Then, in the second stage of the program, these men will commence their specialized training by being assigned to actual practice in the gas industry.

East Ohio Gas, Panhandle Eastern Plan Pipe Line

East Ohio Gas Co. and Panhandle Eastern Pipe Line Co. announced early in February plans for a 120-mile pipe line connecting Maumee, Ohio, and East Ohio's Brush Farm station five miles south of Brecksville.

J. French Robinson, East Ohio's president, announced that his concern and the Kansas City (Mo.) company would apply to the War Production Board for priorities on 22,500 tons of steel to construct the line at a cost of $3,254,000.

The application will cite war plants' increased demands for natural gas in northeastern Ohio and a potential shortage in West Virginia, company spokesmen said.

Mr. Robinson signed a contract with the independent Missouri concern for a minimum of 50,000,000 cubic feet of natural gas daily through the proposed twenty-inch line, conditioned upon W. P. B. release of the required steel.

The line would supply sixty northeastern Ohio communities with natural gas from Texas. The link would be through a pipe running west from Maumee and connecting with another from Amarillo, Texas, to Detroit.

John B. Klumpp Elected Director Of American Meter Co.

John B. Klumpp, Philadelphia, Pa., has been elected to the Board of Directors of American Meter Co.

Mr. Klumpp has had a long and distinguished career in the utility field, being recognized as one of the outstanding gas engineers in the country.

After graduating from Stevens Institute of Technology in 1894 with an M.E. degree, he was employed by the United Gas Improvement Company and remained with that organization in various engineering capacities until 1929, at which time he resigned to engage in private practice as a consulting engineer. During the many years he was associated with the U.G.I., Mr. Klumpp was engaged in gas works

John B. Klumpp

design and construction and in the general operation of various U.G.I. gas and electric properties and on many special assignments.

In his capacity as consulting engineer, he has been engaged by many of the larger utility companies as an expert on gas matters and in making special investigations here and abroad. He has also been employed by several of the larger industrial, steel, and coke oven companies.

More recently, he has been engaged in engineering work in connection with the supplying of gas to the Army bases in and near Tampa, Florida, and by the United States Navy in making a survey of numerous large oil-fired installations in converting them to the use of coal.

Gas Companies Active in Nutrition Program

The Home Volunteer Nutrition program is being promoted actively by 450 gas companies among 11,000,000 housewives throughout the country, it has been announced by George S. Jones, Jr., vice-president of Servel, Inc., of Evansville, Ind., which company planned the project in cooperation with the U. S. Government.

Three hundred of the larger war industries are using the Nutrition in Industry plan that Servel also devised as a contribution to the war effort as an extension of the Home Volunteer Nutrition programs, Mr. Jones said. In many places, gas companies are just beginning to interest industrial concerns in this program, which has proved a valuable channel for human and trade relations. The Nutrition in Industry plan was worked out in conjunction with the U. S. Government agencies and the National Research Council.

Both the Home Volunteer Nutrition and the Nutrition in Industry programs were presented by Servel during 1942, and have been publicized in the daily press, and women's and general magazines. An advertising campaign was conducted under the direction of Robert J. Canniff, Advertising and Sales Promotion Manager of Servel, in a select list of national women's magazines, trade papers and publications of general circulation. Additional promotion was obtained through posters, booklets and other forms of printed media.

The nutrition programs have helped to establish the gas companies as foremost in the food and nutrition fields by bringing to the attention of the American housewife that the local gas utility, through its home service department, is a public source of practical experience in food preparation and preservation. It is anticipated that this relationship between the local gas utility, the consumer and industry will continue to increase and will be even a greater factor in the post-war period.

Joint Council Proposed

In an address delivered before members of the Sales Executives Club at the Hotel Roosevelt, New York, Louis Ruthenburg, president of the Indiana State Chamber of Commerce, and president of Servel, Inc., Evansville, Ind., advocated formation of a joint council composed of members of the Chamber of Commerce of the United States and the National Association of Manufacturers from every state in the Union, to help bring about the "new order of co-operation between government, business, labor and agriculture" which he said must come if the American people are to meet the challenges and opportunities that confront them.

Mr. Ruthenburg outlined the four principal objectives of such a council, briefly as follows:

1. Close collaboration with national legislators by making available to them adequate facilities for economic and social research.

2. Development and direction of a fully effective, dynamic organization for developing and maintaining sound public relationships for American business.

3. Effective integration of all state chambers of commerce and state manufacturers' associations with the Chamber of Commerce of the United States and the National Association of Manufacturers. Through such integration the national bodies would promote effective collaboration between business and government and constructive public relationships for business at state levels.

4. Encourage state organizations, in turn, to bring about the integration of local manufacturers' and employers' associations and local chambers of commerce. Through such bodies close collaboration between government and business and effective public relationships can be developed at community levels.

S. H. Hobson Elected President Geo. D. Roper Corp.

At the annual stockholders meeting and a subsequent directors' meeting held at the Geo. D. Roper Corporation offices January 26, S. H. Hobson was elected a member of the board of directors and president to succeed Mabon P. Roper, who died recently.

S. H. Hobson

All officers of the company were re-elected, including W. E. Derwent, E. Carl Sorby and J. P. Curtin, vice presidents, and Floyd K. Lawson, secretary-treasurer. Manufacturing operations will be under the supervision of works manager Otto Olson.

Hobson, who is a well-known figure in the gas industry, started with the Roper organization 28 years ago and moved progressively from assistant foreman up to the presidency.

As chief engineer from 1919 to 1929 he supervised the entire building expansion program involving the planning and construction of the present Roper plant completed in 1929.

When the Roper-owned Blackhawk Engineering Company was formed in 1941, Hobson was made president of this company while continuing to act as executive vice president of the Geo. D. Roper Corporation.

Ebasco Services Elects Two Vice Presidents

T. C. Wescott, engineering manager, and Harold H. Scaff, comptroller, have been elected vice presidents of Ebasco Services Incorporated, the service organization of Electric Bond and Share Company, according to an announcement made early in February.

CONVENTION CALENDAR

March

11-12 *A. G. A. War Conference on Industrial and Commercial Gas Section,* Detroit, Michigan, Statler Hotel.

18 *New England Gas Assn. Annual Meeting,* Boston, Statler Hotel.

22 *Oklahoma Utilities Assn. Conference,* Tulsa Hotel, Tulsa.

April

26-27 *Accounting Conference,* Cincinnati, Ohio, Hotel Netherland-Plaza.

28 *Natural Gas Management. Conference,* Cincinnati, Ohio, Hotel Gibson.

29-30 *A. G. A. Distribution Conference,* Cincinnati, Ohio, Hotel Netherland-Plaza.

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A.G.A. Appointments

The following appointments to American Gas Association staff positions were announced February 15 by Alexander Forward, managing director of the Association:

Edward R. Martin, to be Supervisor of Statistical Activities, and Thomas J. Shanley, to be Supervisor of Statistical Research.

Mr. Martin and Mr. Shanley have been members of the Association's statistical staff for a number of years.

S. C. Bernhardt Elected V.P. Estate Stove Company

Announcement is made of the election of Mr. S. C. Bernhardt to the office of Vice President in Charge of Sales of The Estate Stove Company, Hamilton, Ohio.

S. C. Bernhardt

Mr. Bernhardt joined Estate in 1929 as manager of its bottled gas range division. He was appointed Eastern Sales Manager in 1931, and in 1938 was made General Sales Manager.

Prior to his connection with Estate, Mr. Bernhardt was Vice President of the Monitor Stove Company of Cincinnati. He is well-known and cordially liked throughout the stove industry.

First Oil Sent to East From New Pipe Line

On Feb. 19th a train of tank cars pulled out of Norris City, Ill., for the Atlantic seaboard with the first oil brought from Texas through the recently completed oil pipe line.

Ceremonies were held to commemorate the record-breaking job of building the twenty-four-inch, 531-mile line in less than six months, crossing eight major rivers and numerous small streams. Construction was authorized because the war caused critical oil shortages on the east coast.

The first shipment totaled 20,000 barrels. Within a few days it will be doubled.

Oil is flowing through the line at the rate of 50,000 barrels daily and is expected to reach a daily maximum of 300,000 barrels within six to eight weeks. In the line at all times will be 1,525,000 barrels of oil.

An 857-mile extension to the east coast now is under construction, with completion scheduled for June 1.

In addition to tank-car shipments from this temporary terminus some oil will flow through a new fourteen-inch line from Norris City to Enfield—five miles away—to connect with the Ohio Oil Company's pipe-line system to Pennsylvania.

The first train shipment was consigned to the Gulf Oil Company at Philadelphia.

Tappan Stove Guide

The Tappan Stove Co., Mansfield, Ohio, is offering a free 32-page booklet, the Tappan Owner's Guide.

Although designed primarily to supply the housewife with helpful tips on the use of her range, the Owner's Guide is also expected to lessen the servicemen's burden by encouraging home range repairs and adjustments.

Subjects covered include: adjustments, replacements, care, cleaning, time and temperature charts for all cooking operations; tips on fuel saving; detailed instructions on the best methods of top-burner cooking, baking, roasting, broiling and canning; and solutions to common cooking problems.

Night Courses at Cooper-Bessemer Develop Employee Education

To help enterprising workers of both factory and office attain more responsible positions in the company, The Cooper-Bessemer Corporation, Mt. Vernon, O., recently announced a training plan for developing employees' education along specific lines.

Ralph L. Boyer, the corporation's chief engineer, worked out the details of this program. These arrangements were made possible through the co-operation of the regional head of the Office of Engineering, Science and Manual Defense Training, Ohio State University, Columbus, Ohio.

The subjects, chosen from a list of government approved Extension Defense Courses, as presented at Ohio State University, cover fundamental engineering drawing, and the engineering essentials of tool, jig and fixture design.

Classroom activities, held at the Cooper-Bessemer plant, include lectures and laboratory exercises, dimensioning, working drawings, recitations and tool design. Three hour sessions are conducted two nights a week, and, to complete a course requires from 12 to 16 weeks.

Instruction is under the supervision of two veteran employees of the Cooper-Bessemer Corporation; one a recognized draftsman and the other an expert tool designer. Both are paid by the federal government.

Bristol Company Promotions

The Bristol Co., Waterbury, Ct., announces the following changes in their organization:

L. G. Bean has been appointed as Vice-President in Charge of Engineering and Sales from the position of Vice-President and General Sales Manager which he has held since 1939.

E. L. Stilson has been appointed assistant sales manager with headquarters at the general offices, Waterbury, Connecticut.

Harry E. Beane has been named sales manager.

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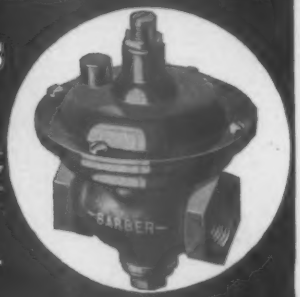

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Roper Corporation Employee Receives War Workers' Award

Jack Hennessy of the Geo. D. Roper Corporation received the Chicago Tribune War Workers' Award for January for outstanding contributions to the war production program. Presentation of a gold pin studded with three diamonds was made February 16 over radio station WGN with Lt. Colonel Frank W. Parker of the Chicago Ordnance District making the presentation.

Jack Hennessy in Action

Hennessy was selected for the award on the basis of the development of two new machines as well as for other work which went far beyond what might reasonably be expected of him in the line of duty.

He designed and built a single spindle drill for the drilling of tracer holes in 75 millimeter shot. This machine replaced a vertical four spindle drill press which was not doing the job as Roper wanted it done. The operation was a serious bottleneck.

In talking about Hennessy's work, Roper general superintendent, Lionel R. Jensen, explained, "At first we used a standard vertical drill press. We weren't getting production and we weren't getting dimensional control. Talk about bottlenecks. This one was holding up everything. Unknown to me or anyone else Hennessy took the bull by the horns and developed a machine that beats the daylights out of the original machine. After several days we knew something was up because he asked permission to stay here night after night. He even worked on the idea at home."

The new machine, which is of simple design, has increased production by 300%. Moreover, it has made possible for an unskilled girl to perform this operation, whereas Roper formerly had its best men tied up on this job. The new machine which was built in the Roper plant cost approximately $300 as against a $5000 cost for the original type of machine which was virtually impossible to get.

Hennessy also developed a milling machine which mills slots into the nose of the shot. This machine has increased produciton between 400 and 500%.

Foreman Sidney H. Tate pointed out that machines of the old type required six operations and had to be attended by three crack employees and an inspector in order to get any production. Hennessy's machine does the entire job in one operation, increasing production 300% and requiring the services of only a single operator per machine.

Modest Jack Hennessy who usually successfully avoids the spotlight had only this to say, "I am surprised and thrilled at this Award and am thankful for the opportunity I have had in helping to promote the war effort and my only hope is that I can do a lot more."

W. H. McKENZIE

W. H. McKenzie, Vice-President and General Manager of The Wyandotte County Gas Company, known to men in the gas industry throughout the country as the "Dean of American Gas Men," died at his home in Kansas City, Kans., February 12. He was 80 years old.

He had suffered from a heart ailment some years ago, but until a week prior to his death had gone to his office regularly.

Besides being Vice-President and General Manager of the Wyandotte company, he was also a member of the Board of Directors of that organization and a member of the Board of Directors of The Gas Service Company and the Kansas City Gas Company.

He was born in Harrisonville, O., November 15, 1862. When he first became connected with the gas business he was only 14 years old and in short trousers; he began work as a helper in various departments of the gas manufacturing plant in his home town. A year later, Mr. McKenzie was managing the Manufactured Gas plant for the Ohio Soldiers and Sailors Home and when he was just 16 years old had complete charge of the gas plant at Xenia, O. He was 18 when he attended the first National Gas Convention.

In 1886 the United Gas Improvement Company, which owned The Wyandotte County Company, sent Mr. McKenzie to Kansas City, Kans., where he became superintendent of the property. He remained with the company up to the time of his death with the exception of a brief period from 1897 to 1905.

It was when he returned that natural gas was first introduced in Kansas City, Kans. The switchover from manufactured to natural gas was completed under his direction in 1905.

CHARLES H. PRINTZ

Charles H. Printz died of a sudden heart attack, January 31st at his home in Cleveland, O. He was 67 years old.

His father, Mr. Eugene Printz, was manager of the coal gas plant in Zanesville, Ohio, and for many years was Secretary of the Ohio Gas Association; his son learned the gas business under his guidance and later managed the gas properties in Little Rock, Arkansas, for Mr. Rufus C. Dawes. Later, he became successively Sales Manager for the Missouri Fire Brick Co., St. Louis, Mo., Western Gas Construction Co. of Fort Wayne, Ind., and the Stacey Manufacturing Co. of Cincinnati, Ohio.

In 1914 Mr. Printz moved to Cleveland, Ohio, and was elected Vice President of The Gas Machinery Company, which position he has held since.

In addition to having a knowledge of the operation of gas properties Mr. Printz sold and installed gas benches, ovens, machinery and holders all over the United States and Canada, where he had a wide acquaintance and traveled extensively.

CHEMICAL TABLES

A Handbook of selected subjects from the Handbook of Chemistry & Physics 1938 Edition.

Subjects covered include Mathematical Tables; Properties and Physical Constants of Organic and Inorganic Compounds; General Chemical Tables; Specific Gravity and Properties of Matter; Heat and Hygrometry; Electricity; Light; Quantities and Units. Also other miscellaneous subjects.

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New England Gas Association

The 17th Annual Business Conference of the New England Gas Association will be held March 18th at Hotel Statler, Boston, Mass.

The customary two-day annual meeting of the New England Gas Association will be limited to one day with two business sessions this year because of the war conditions. Every subject on the program has a direct or an indirect connection with the present emergency conditions under which the New England gas industry is operating. The Committee has endeavored to present a variety of pertinent matters.

At the morning session papers on the following subjects will be presented:

The Gas Industry Today, Alexander Forward, Managing Director, American Gas Association.

Home Service In War Time—A Bill of Particulars, George S. Jones, Jr., Vice President and General Sales Manager, Servel, Inc.

Post-War Planning From The Manufacturers' Standpoint, Colonel Willard F. Rockwell, President, A. G. A. E. M., President, Pittsburgh-Equitable Meter Company.

Remarks, Alexander Macomber, Director, Manufactured Gas Division, Office of War Utilities, War Production Board, Washington, D. C.

President's Address, John West, President, The New England Gas Association, President, Worcester County Electric Company.

Some Trends In Public Utility Regulation, C. O. Ruggles, Professor of Public Utility Management and Regulation, Director of Division of Research, Harvard Graduate School of Business Administration.

Afternoon Session

Panel—Cold Weather Emergency Operations. Chairman, R. J. Rutherford, Vice President, Worcester Gas Light Company. Various developments connected with: Material shortages, plant operations, distribution, utilization.

Can Management And Labor Cooperate? E. C. Robbins, Professor of Industrial Management, Harvard Graduate School of Business Administration.

Developments In The Petroleum Industry and Their Effect On The Gas Industry, E. Holley Poe, Director of Natural Gas and Natural Gasoline, Office of Petroleum Administrator for War, Washington, D. C.

Gas Industry's War Activities, Ernest R. Acker, Chairman, Committee on War Activities, American Gas Association. President and General Manager, Central Hudson Gas & Electric Corp.

The Beveridge Plan and Wage Control in Great Britain

Extracts from a letter to Mr. Davis M. DeBard, New York, from Mr. Harry Towers, General Manager, Edmundsons Electricity Corporation, Ltd., London, England, relative to the Beveridge Plan and by what means are wage rises kept under control in England.

Jan. 18, 1943.

Dear Davis:

Since I last wrote you, a Report on Social Insurance and Allied Services which is called the "Beveridge" Report, has been published. This is a voluminous document prepared by Sir William Beveridge who is an Economist and Professor at Oxford University. He was aided by a Departmental Committee who all seem to be Government Servants.

This Report has caused a lot of discussion in the country and divided it into two camps—one being comprised of those who, for a variety of reasons, desire to see what has been termed "Security from the Cradle to the Grave" and the other those who want to get the present job finished first and thereafter get the men home and into productive employment before embarking on schemes which will cost a terrific amount of money. I must confess, being an individualist, I find myself in the latter camp and though I am quite willing to go in for a measure of Social evolution, it seems to me that the Beveridge Report is putting "the cart before the horse." We are being told in a very excellent way how State benefits can be given to every one at the age of 65, free medical benefits paid during sickness and so on, but we are not being told or guaranteed that degree of prosperity in the post-war world which will ensure that our trade and industry will be sufficiently prosperous to carry the cost. I am not enlarging on this at the moment as the Report is so lengthy that it takes considerable digesting and no more than preliminary skirmishes have taken place between the contending forces. As the situation develops I will try and keep you posted. Mind you, please don't get the idea that the opponents are against planning for the future now. On the contrary, they are all for it, but their point particularly is that such plans should take the form of facing up to realities and practical matters, leaving Utopian theories for the days when we have peace and, as result of peace, are able to assess just what damage to the world's economic structure has been done by the war and make some effort to repair it.

Answering the question: To what extent and by what means are wage rises kept under control, I give you two points of view:

(a) The machinery governing increases in labour rates varies with different industries but the procedure is generally similar in all cases. In the case of agriculture, for example, which is still the primary industry in this country, the whole country is divided into a number of areas. The agricultural wage rates are determined by the local Agricultural Wages Board. This Board usually consists of five members, two representatives from the employers' side and two representatives of the agricultural workers' and an impartial chairman, usually a solicitor or local magistrate, acceptable to both parties, controls the meetings. The workers' representatives state their case and reasons for asking for an increase in wages rates. The farmers' representatives then put forward their point of view. A vote is then taken and whether or not a recommendation for an award is made will, in most cases, clearly depend upon the vote of the chairman. The control of wages has become much more rigid during the past two years. The acute scarcity of skilled men coupled with the rising demand gave rise to a degree of competition amongst employers with the result that the absurd position arose where Government Departments were frequently in competition with and bidding against one another in regard to labour. This applied more particularly to building and civil engineering work. To overcome this, labour rates were fixed together with conditions of employment in respect to each area, and it became illegal for any employer to offer a higher wage or better conditions of employment.

(b) An able review of this problem appears in "The Secretary" of Oct., 1942. The following is an extract from it:

"More important than the overall rise in wages rates and in earnings are the anomalies which have arisen as a result of allowing the normal peace-time methods of wage bargaining to continue. The whole process of wage increases has been sectional and the industries which have benefited most are either those whose Unions have possessed and exercised the greatest power in bargaining, or those which have escaped the Government control for the longest time. Each increase in wages in one industry has tended to lead to an increase in another, either because of its effect in increasing prices or because it has changed the traditional relationship between rates of wages in different industries."

In many cases wage increases have been successfully demanded by certain Unions. Other employers have then voluntarily followed suit rather than have their employees or grades of employees not covered by Union rates suffer by comparison.

My own view is that, though there have been minor abuses in the shape of forced wage increases by certain Trade Unions, and even instances of competition between employers raising wages to get labour, on the whole the system of Joint Boards of similar, representing employers and employees, has worked well as is instanced by the fact that wage increases have done no more in the main than keep pace with the increased cost of living. Obviously, as the Government have complete control of the latter, if they decide to allow it to rise a point or two, it is not unfair that wages should follow a similar trend, unless a deliberate intention be embarked upon to destroy the standard of living. This has already been changed out of recognition due to conditions arising out of the war over which neither the Government nor the people have any control.

Relative to post-war employment, there must, of course, be a depression, if this is indicated only by the numbers in employment. For many months, and possibly for a number of years, the scale of employment should be at least as high as in, say, 1938. It is not expected that any depression is likely to be as severe as the depression which followed the last war. It is much too early yet to get a true perspective. It depends how long the war goes on and what International arrangements can be made. The tax refund will not, individually, be large, but will provide some reserve of consumer purchasing power.

(signed) HARRY TOWERS.

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Worthington Pump and Machinery Corp. .... —

Centrifugal Blowers—Bulletin B-4 gives capacities, pressures and power consumption of Allen Billmyre Centrifugal Blowers and Exhausters.

In addition to units shown in previous catalogs, Bulletin B-4 also shows the Model SG Multi-Stage, Quiet Operating Type, Blowers and Exhausters.

Price lists and dimension sheets are available and will be sent on request to the Company at Mamaroneck, New York.

Steam Hose—Containing simple, easy-to-read rules for the care and maintenance of steam hose, so vital now that rubber is so scarce, as well as detailed instructions on the proper methods to attach couplings, a revised catalog section on its lines of steam hose has been issued by The B. F. Goodrich Company and is available upon request to its principal offices in Akron, Ohio. Data on inside and outside diameters, weight and number of plies also are listed.

Centrifugal Compressors — Catalog No. 386-2, issued by B. F. Sturtevant Co., Hyde Park, Boston, Mass., describes and illustrates their Design 9 Centrifugal Compressors which are designed for application wherever blowers for smaller capacity work are required.

It comprises 20 pages devoted to descriptive data, performance tables, dimension diagrams, unit and installation photographs. These Compressors are available in more than 200 sizes, with pressures from ½ to 3 pounds, volumes up to 5,500 c.f.m. Features include ability to deliver a wide range of volumes at constant pressures, exceptionally quiet operation, compact design, easy installation and power savings.

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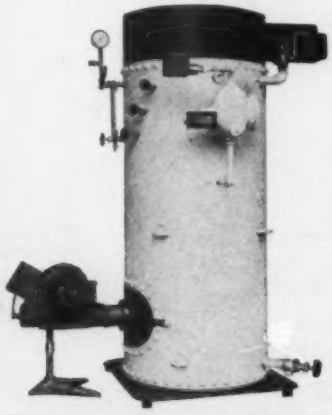

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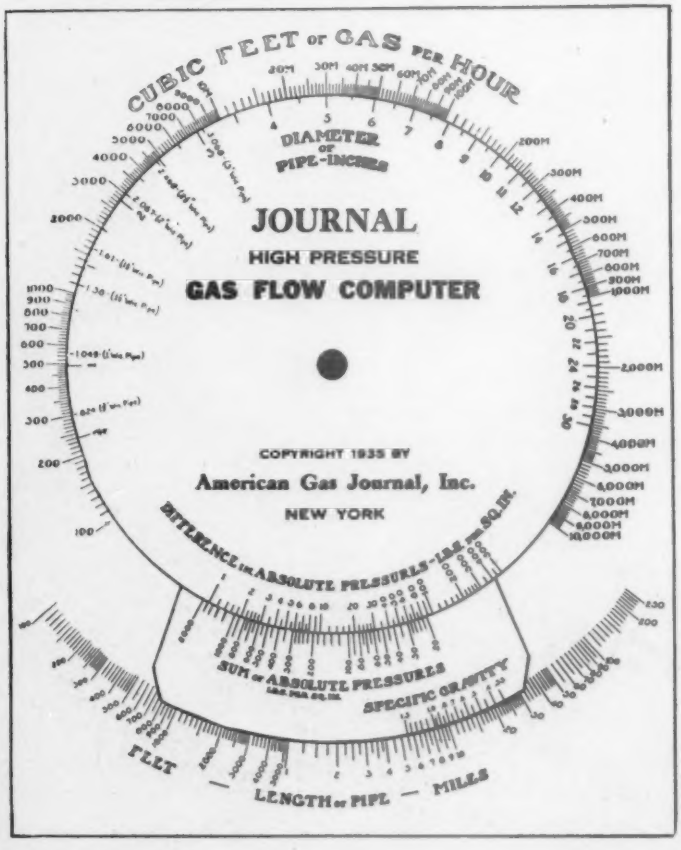

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Specific Gravity 1.5-.35
Length of Pipe—Feet 100-5000
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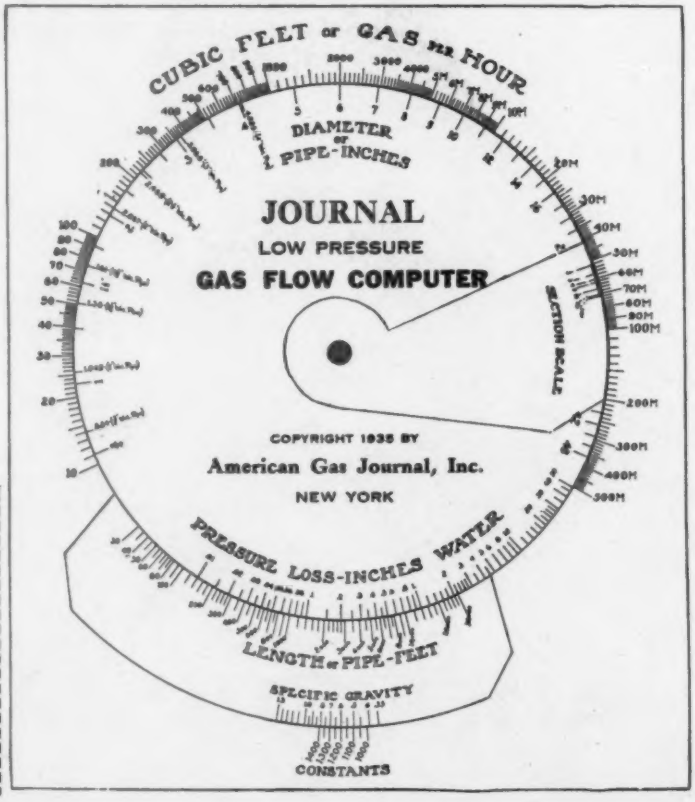

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